EXHIBIT A

Joint Comments Filed by the League of California Cities, the California State Association of Counties and SCAN NATOA Regarding the FCC's Notice of Proposed Rulemaking

In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies (WT Docket No. 13-238)

[appears behind this coversheet]

EXHIBIT A

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies	)	WT Docket No. 13-238
	)	
Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting	)	WC Docket No. 11-59
	)	
Amendment of Parts 1 and 17 of the Commission's Rules Regarding Public Notice Procedures for Processing Antenna Structure Registration Applications for Certain Temporary Towers	)	RM-11688 (terminated)
	)	
2012 Biennial Review of Telecommunications Regulations	)	WT Docket No. 13-32

JOINT COMMENTS FILED BY THE LEAGUE OF CALIFORNIA CITIES, THE CALIFORNIA STATE ASSOCIATION OF COUNTIES AND SCAN NATOA REGARDING THE FCC'S NOTICE OF PROPOSED RULEMAKING

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SUMMARY

The League of California Cities, the California State Association of Counties and the States of California and Nevada Chapter of National Association of Telecommunications Officers and Advisors ("NATOA") offer these comments in response to the Federal Communications Commission's (the "Commission") Notice of Proposed Rulemaking ("NPRM") adopted and released on September 26, 2013.[1]

The League of California Cities ("League") is an association of 470 California cities united in promoting the general welfare of cities and their citizens.

The California State Association of Counties ("CSAC") is a non-profit corporation whose membership consists of all of California's 58 counties. The mission of CSAC is to represent county government before the California Legislature, U.S. Congress, state and federal agencies and other entities, while educating the public about the value and need for county programs and services.

The States of California and Nevada Chapter of the National Association of Telecommunications Officers and Advisors ("SCAN") is an association with a history spanning over 20 years representing the interests of over 300 members consisting primarily of local government telecommunications officials and advisors located in California and Nevada. Accordingly, SCAN's members have a keen interest and stake in this proceeding and its outcome.

The League, CSAC and SCAN are collectively referred to in these comments as "California Local Governments."

Section 6409(a). In its brief existence, Section 6409(a) appears to facilitate *de minimis* changes to legally established wireless facilities without much controversy. A diligent search revealed that only three cases even address the statute. The Commission should therefore find, at least at this early stage, that it should neither interpret the terms in Section 6409(a) nor adopt any related mandatory rules.

In the event that the Commission determines that it should exercise its regulatory authority with

[1] *See* In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, *Notice of Proposed Rulemaking*, 2013 WL 5405395 (F.C.C.), ¶ 102 (adopted Sep. 26, 2013) [hereinafter "NPRM"].

EXHIBIT A
SUMMARY

respect to Section 6409(a), California Local Governments counsels the Commission to (1) narrowly interpret the statutory terms to afford them the narrow and common definition that Congress intended; (2) affirm the primacy of local authorities to define a "substantial" change; (3) bear in mind that the statute mandates a specific result without any reference to any specific process; (4) acknowledge local courts as the most appropriate and efficient means to resolve wireless land use disputes; and (5) consider the federalism and Tenth Amendment limits on federal power over the States and their political subdivisions.

Additionally, although Section 6409(a) contains few words and virtually no legislative history, the Commission should not view it as a blank slate. Congress enacted Section 6409(a) within the context of the Telecommunications Act of 1996 ("Telecom Act"), and the Commission should interpret any new rules to govern Section 6409(a) in manner consistent with the policies, objectives, history, and well-developed case law connected with the Telecom Act. Section 6409(a) exists as a very narrow exception the rule of local authority explicitly reserved in the Telecom Act, and the Commission should not interpret the statute so broadly that the exception swallows the rule.

As a summary, California Local Governments recommends that the Commission should not adopt any rules at this point in time. However, if the Commission decides to act, it should:

1. refine its proposed interpretation of "transmission equipment" to (i) limit its scope to electronic components that actually transmit or receive communications signals and (ii) clarify that State and local governments retain their discretionary authority over "other" equipment that does not transmit or receive communication signals, such as backup power generators;

2. revise its proposed interpretation of "wireless tower or base station" to clearly distinguish between a "wireless tower" and a "base station";

3. interpret a "wireless tower" to mean a structure built solely or primarily to support antennas—not any structure that could hypothetically support wireless equipment;

4. interpret a "base station" to mean a system of fixed equipment that transmits and receives wireless signals;

5. interpret "collocation" so that it applies to only wireless towers or other structures that actually support or house *existing* wireless communication facilities;

6. affirm that local governments retain their traditional authority to determine whether a particular eligible facilities request will substantially change the physical dimensions of an existing wireless tower or base station;

7. interpret a "substantial change" to consider changes to *all* physical dimensions and the effect of those changes on public safety and generally applicable laws;

8. eliminate needless loopholes for "interference," "inclement weather," and "tower creep" in any proposed test for what constitutes a substantial change;

9. apply the same standards in the *2009 Declaratory Ruling* to permit requests under Section 6409(a);

10. reject any proposals for a deemed-granted remedy; and

11. affirm that the proper venue to resolve wireless land-use disputes lies in local courts.

Section 332(c)(7)(B). The Commission also seeks comment on whether to modify its *2009 Declaratory Ruling* that interprets the term "reasonable time" as used in Section 332(c)(7)(B). For the most part, State and local governments adapted well to the *2009 Declaratory Ruling*, and no factual record before the Commission provides a basis for change. California Local Governments recommends that the Commission should not adopt any new rules.

In the event that the Commission determines that it should exercise its regulatory authority with respect to Section 332(c)(7)(B), California Local Governments advises the Commission carefully preserve local control over and flexibility in the permit process to encourage government, industry, and community stakeholders to cooperate towards creative wireless solutions. Any finally-adopted rules must preserve enough local authority to bring wireless applicants to the negotiating table.

As a summary, California Local Governments recommends that the Commission should not adopt any rules at this point in time. However, if the Commission decides to act, it should:

1. harmonize "collocation" with the recommended definition so that it applies to only wireless towers or other structures that actually support or house *existing* wireless communication facilities;

2. affirm local authority to define what constitutes a "complete" permit application;

3. affirm that the "reasonable time" for permit review under Section 332(c)(7)(B) does not run concurrently with a reasonable and nonprohibitory moratorium;

4. find that reasonable zoning distinctions between municipal and private property serve important purposes rationally related to public health and safety; and

5. reject a deemed-granted remedy, just as it did in the *2009 Declaratory Ruling* and for the same reasons

The Commission is well-intentioned in seeking to clarify various aspects of Section 6409(a) and Section 332(c)(7). California Local Governments endorse certain proposed rules, such as the proposal to find that Section 6409(a) does not affect the proprietary capacities of governments. However, in some respects the Commission proposes to define terms too broadly, and in many instances the Commission proposes to act when it need not. Most importantly, the Commission can avoid constitutionally-questionable issues if it adopts the appropriately narrow interpretations and exercises an appropriate degree of regulatory restraint. In those instances discussed below, the Commission should embrace the proposition that "less is more."[2]

[2] Robert Browning, Andrea del Sarto (called the "Faultless Painter") 2 The Poems & Plays of Robert Browning, 352, 353 (J.J. Dent & Sons Ltd. ed. 1932).

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COMMENTS OF THE CALIFORNIA LOCAL GOVERNMENTS

I. INTERPRETATION AND IMPLEMENTATION OF SECTION 6409(A) ISSUES

The Commission seeks comment on a wide range of Section 6409(a)-related issues. California Local Governments offer this guidance on how the Commission should address those issues, and on whether the Commission should even act at this time.

In some instances, the Commission need not act at all because the facts about wireless deployment show that the industry does not require strong new federal regulatory intervention to flourish. The plain fact is that the Telecom Act, as it existed before Section 6409(a), facilitated an explosive growth in the number and reliability of wireless communication facilities.[1] For example, since Congress enacted the Telecom Act some eighteen years ago, the number of wireless communication facilities increased from fewer than 52,000 in 1997 to over 300,000 in 2013.[2] Such exponential growth argues against the need for strong federal regulatory intervention.

In adopting Section 6409(a), Congress's narrow intent was to facilitate *de minimis* changes to existing wireless towers or base stations. The Commission need not adopt any new legislative rules to accomplish that purpose. Should the Commission feel compelled to adopt new rules, however, it should afford the plain and common meanings to technical terms and preserve local authority to enforce generally applicable laws under valid police powers. The comments in this section address some of the critical issues related to Section 6409(a) raised in the NPRM.[3]

A. An "Eligible Facilities Request" Means a Request to Place or Remove Equipment that Actually Transmits or Receives Communication Signals On or From a Structure that Currently Supports a Wireless Facility

The Commission should carefully consider what constitutes an "eligible facilities request"

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[1] *See* Ashira Pelman Ostrow, *Process Preemption in Federal Siting Regimes*, 48 HARV. J. ON LEGIS. 289, 293 (2011) (describing the success of the Telecom Act and the correspondingly successful growth of our national wireless infrastructure).

[2] *See Wireless Quick Facts*, CTIA: THE WIRELESS ASSOCIATION, http://www.ctia.org/your-wireless-life/how-wireless-works/wireless-quick-facts (last visited Jan. 22, 2014).

[3] To the extent that the California Local Governments do not discuss specific questions raised in the NPRM, the Commission should not draw any inference of support or a lack of support. California Local Governments anticipate providing additional comments during the NPRM reply comment period.

because, as the NPRM noted, how it defines this term significantly impacts the scope and applicability of Section 6409(a).[4] The following subsections highlight several critical areas where the Commission should clarify the narrow meaning of specific terms.

1. "Transmission Equipment" Means an Electronic Component that Transmits or Receives Communication Signals

The Commission proposes to expansively define the phrase "transmission equipment" as "antennas and other equipment associated with and necessary to their operation, including, for example, power supply cables and a backup power generator."[5] California Local Governments believe the use of the word "transmission" signifies that the equipment must actually transmit and receive radio frequency communications, and does not not include nonessential equipment that does not actually transmit or receive communication signals. The Commission should refine its proposed interpretation to (1) limit its scope to electronic components that actually transmit or receive communications signals and (2) clarify that State and local governments retain their discretionary authority over "other" equipment that does not transmit or receive communication signals, such as backup power generators.

The term "transmission equipment" commonly refers to a component part of a base station, such as the antennas, radios, and connector cables. The capability to transmit a signal distinguishes "transmission equipment" from other equipment at the wireless communication facility.

The Commission proposes, however, to define "transmission equipment" to include objects that do not actually transmit or receive radio frequency signals.[6] A wireless facility does not necessarily require all the equipment that would fall under the proposed definition. For example, even though a wireless facility requires a primary power source, it does not necessarily require a backup power source. Standby power generators with their attendant fuel source, power transfer switching, fuel catch basins, and the like typically occupy hundreds of cubic feet, which virtually always results in a substantial change

[4] *See* NPRM, *supra* note 1, ¶ 102.

[5] *See* NPRM, *supra* note 1, ¶ 105.

[6] *See* NPRM, *supra* note 1, at ¶ 104.

to the physical dimensions of a wireless site. Backup power generators are non-transmission accessories rather than transmission equipment necessities.

Various types of backup power generators also raise environmental, safety, and zoning issues more properly suited to a discretionary review process. A diesel generator emits caustic noise, noxious fumes, and environmentally-toxic chemicals. A hydrogen fuel cell standby power generator requires zoning setbacks for fire safety purposes. A State or local government may legitimately seek to channel such generators to facilities into more appropriate areas, such as industrial zones, and encourage other cleaner and quieter power solutions in areas inappropriate for diesel generators, such as residential or open space zones.

The Commission should clarify its proposed definition of "transmission equipment" to include only those elements necessary to actually transmit and receive wireless services, and exclude those elements not required for those limited purposes.

2. The Commission Should Refine Its Proposed Comingled Definition of a "Wireless Tower or Base Station" Because Congress and Common Usage Distinguish Between a "Wireless Tower" and a "Base Station"

The Commission proposes to expansively define a "wireless tower or base station" to mean "structures that support or house an antenna, transceiver, or other associated equipment that constitutes part of a base station, even if [those structures] were not built for the sole or primary purpose of providing such support."[7] This definition is ill-advised because it conflates two distinct statutory terms under one single test (*i.e.*, whether the structure supports or houses wireless equipment). In addition, a wireless tower is a structure—whereas a base station is a system of transmission equipment, and distinct from the structure that supports or houses it.

Contrary to the Commission's analysis, the proposed rule in the NPRM does not actually distinguish between a "wireless tower" and a "base station."[8] A "cardinal principal" of statutory interpretation requires that two different words in the same statute receive two different meanings "so that

[7] *See* NPRM, *supra* note 1, at ¶¶ 107–08.

[8] *See* NPRM, *supra* note 1, at ¶¶ 107–08.

no provision is rendered inoperative or superfluous, void or insignificant."[9] Yet the Commission's proposed test does not distinguish between the two terms. Instead, whether something qualifies as a "wireless tower or base station" under the proposed rule effectively depends on whether it supports or houses a piece of wireless equipment.[10] This singular view of a "wireless tower or base station" as anything that supports or houses wireless equipment impermissibly and confusingly lumps together two distinct statutory terms.

Congress intended the terms "wireless tower" and "base station" in Section 6409(a) to mean different things because it inserted the disjunctive "or" rather than the conjunctive "and" between them.[11] Accordingly, the Commission should not adopt the its proposed definition because it must afford the different words different meanings.[12]

3. Congress Intended "Wireless Tower" to Mean a Structure Solely or Primarily Built to Support Antennas, Just as the Commission and the Wireless Industry Already Defines That Term

Consistent with congressional intent, FCC rules, and common usage, the Commission should interpret a "wireless tower" to mean a structure built solely or primarily to support antennas—not any structure that could hypothetically support wireless equipment.[13]

First, Congress intended a "wireless tower" to narrowly refer to a structure specifically built to support wireless antennas because it chose a narrower statutory term than it adopted in other statutes.[14] In a different part of the Middle Class Tax Relief and Job Creation Act of 2012, Section 6206(c)(3) directs

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[9] *See Miller v. Clinton*, 687 F.3d 1332, 1347 (D.C. Cir. 2012) (citing *Hibbs v. Winn*, 542 U.S. 88, 101 (2004)).

[10] *See* NPRM, *supra* note 1, at ¶ 108 (stating too broadly that Congress intended "to streamline the facilities application process" without acknowledging the explicit limits in the statute itself).

[11] *See* 47 U.S.C. § 1455(a).

[12] *See Miller*, 687 F.3d at 1347.

[13] *See* INTERGOVERNMENTAL ADVISORY COMM., ADVISORY RECOMMENDATION NO. 2013-13, RESPONSE TO NOTICE OF PROPOSED RULEMAKING ADOPTED AND RELEASED SEPTEMBER 26, 2013 at 5 (2013) [hereinafter "IAC NO. 13"] ("The Commission must define ["wireless tower"] in a way that makes clear that a wireless tower is a structure built *for the primary purpose* of attaching antennas and other ancillary wireless equipment." (emphasis in original)).

[14] *See id.* at 5 ("The Congressional use of the term "wireless towers" does not suggest that the Commission should interpret a Congressional intent to define the term any way other than a vertical tower structure built for the primary purpose of housing wireless communications facilities.").

FirstNet to utilize "existing . . . commercial or other communications infrastructure . . . and . . . Federal, State, tribal, or local infrastructure" to build, deploy, and operate a nationwide public safety broadband network.[15] This language refers to a much broader class of structures than the language in Section 6409(a). The word "communications" is broader than "wireless," and "infrastructure" is broader than "tower."[16] Just as Congress understood the difference between "wireless" services and "personal wireless services" in two different statutes enacted nearly a decade apart, Congress differentiated between generalized commercial, communication, and government infrastructure and specific wireless towers described in the same public law.[17]

Second, the proposed definition conflicts with how the Commission defines a wireless tower in nearly every other context. Both the Nationwide Programmatic Agreement and the Collocation Agreement define a tower as one built solely or primarily to support antennas.[18] Although the NPRM suggests that Congress intended a broader term, the comparative analysis above shows that Congress intended the narrower definition consistent with the Nationwide Programmatic Agreement and the Collocation Agreement approach.[19] The Commission should continue to define a "wireless tower" to mean a structure built solely or primarily to support wireless antennas, as Congress intended.

Lastly, the Commission's proposed definition conflicts with the common use of the term. The word "tower" is defined in the dictionary as follows: "a building or structure typically higher than its diameter and high relative to its surroundings that may stand apart (as a campanile) or be attached (as a church belfry) to a larger structure and that may be fully walled in or of skeleton framework (as an

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[15] *See* Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6206(c)(3), 126 Stat. 156; *see also id.* § 6206(b).

[16] *Compare id.* § 6207(c)(3), *with* 47 U.S.C. § 1455(a).

[17] Compare 47 U.S.C. § 6409(a), *with* 47 U.S.C. § 332(c)(7)(C)(i).

[18] *See* 47 C.F.R. Part 1, App. C § II.A.14 [hereinafter "Nationwide Programmatic Agreement"]; FCC, NATIONWIDE PROGRAMMATIC AGREEMENT FOR THE COLLOCATION OF WIRELESS ANTENNAS (2001) [hereinafter "Collocation Agreement"].

[19] *See supra*, notes 14–16, and accompanying text.

observation or transmission tower."[20] That dictionary definition clearly distinguishes the word "tower" from "base station." Furthermore, in a letter written to T-Mobile by its legal counsel—and subsequently provided to a local government as part of a permit application packet and made part of the public record—the Channel Law Group stated that:

> Although questions may arise regarding some of the terms or concepts employed in [Section 6409(a)], in fact *their meaning is well established.* The Federal Communications Commission ("FCC") has relied for years on these same terms or concepts in connection with the regulation of wireless broadcasts and communications. . . . In the Collocation NPA, the FCC has defined the term 'tower' as 'any structure built for the *sole or primary purpose* of supporting FCC-licensed antennas and their associated facilities."[21]

This analysis demonstrates that even members of the wireless industry who would benefit from such an overly broad standard proposed by the Commission do not believe that Section 6409(a) applies to structures not built solely or primarily to support wireless antennas.[22] Thus, the clarity of the definition in the Nationwide Programmatic Agreement and the Collocation Agreement reflects actual usage among significant members of the wireless industry, and align with the traditional usage by local governments.

Although many structures *may be able* to support wireless equipment, a structure does not become a "tower" merely because it supports an antenna. For example, a commercial office building does not somehow morph into a wireless tower simply because a wireless carrier has affixed antennas to that building. That illogical result would change the way safety codes apply to structures, and even open the door to building owners wanting to add height to a building for office space purposes to claim that they are subject to the non-substantial change element of Section 6409(a). Congress could not have intended this result. The Commission should continue to define a "wireless tower" as a structure built solely or primarily to support antennas.

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[20] *See* MERRIAM-WEBSTER, http://www.merriam-webster.com/dictionary/tower (last visited Jan. 28, 2014). Courts will often look to the dictionary to interpret an undefined statutory term. *See, e.g.*, *Taniguchi v. Kan Pac. Saipan, Ltd.*, 132 S. Ct.1997, 2003–04 (2012) (surveying various dictionaries published in the effective year of a statute to find the commonly understood meaning of a term at the time).

[21] *See* Letter from Robert Jystad, Channel Law Group, LLC, to Joseph Thompson, T-Mobile (Oct. 5, 2012) (attached as Exhibit _ to these comments) (emphasis added).

[22] *See id.*

4. A "Base Station" Means a Discrete System of Transmission Equipment in a Fixed Location, but It Does Not Mean the Location Itself

A base station generally refers to a system of fixed equipment that transmits and receives wireless signals.[23] This equipment includes the transmission equipment (*i.e.*, transmitters and receivers, mobile telephone switching center interfaces, and the cables that interconnect them). Equipment also optionally found at base stations, but not necessary for transmission and reception of wireless signals, includes work lights, backup power systems, and environmental control equipment. Just as wireless providers customize wireless towers to fit within the spatial limits and aesthetic character of the site, they also customize base stations to the particular circumstances of the site. Common places to find base stations include mechanical penthouses, outdoor equipment shelters, underground vaults, exposed concrete pads, and building equipment rooms. Wireless providers also typically install a security fence or wall around exposed outdoor base stations.

A base station is a unified system of component parts because one base station corresponds to one wireless communication facility. This concept becomes critically important in circumstances where the particular features of the site require the wireless provider to distribute the base station equipment in different areas of the same physical location.

The definition of a base station must also be distinguished from the structure that supports or houses it. Although the base station consists of equipment at a particular place or in a particular structure, like the discussion, *supra*, a non-purpose built place or structure does not become a base station merely because it subsequently supports or houses one.[24]

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[23] *See, e.g.*, Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Including Commercial Wireless Services, *Fifteenth Report*, 26 FCC Rcd. 9664, 9841, ¶ 308 (adopted June 24, 2011) ("A base station generally consists of radio transceivers, antennas, coaxial cable, a regular and backup power supply, and other associated electronics. These base stations are generally placed atop a purpose-built communications tower, or on a tall building, water tower, or other structure providing sufficient height above the surrounding area."); INTERGOVERNMENTAL ADVISORY COMM., ADVISORY RECOMMENDATION NO. 2013-9, RESPONSE TO THE WIRELESS TELECOMMUNICATIONS BUREAU'S GUIDANCE ON INTERPRETATION OF SECTION 6409(A) OF THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012 at 3 (2013) [hereinafter "IAC NO. 9"] ("A base station by the Commission's own definition is a set of equipment components that collectively provides a system for transmission and reception of personal wireless services).

[24] *See* IAC NO. 9, *supra* note 23, at 3 ("A mere equipment or power supply box, for example, is not in and of itself a base station, nor is a structure that supports or houses such boxes.").

A few examples will help illustrate the point: Consider first a five-story building that hosts a wireless communication facility, which consists of an equipment room with radio equipment on the third floor connected to antennas on the roof via cables that run through a duct system. The entire building is not a "wireless tower" because it was not built solely or primarily to support the antennas. Indeed, in this case, no tower exists. The "base station" consists of the equipment physically distributed throughout the equipment room, the duct system, and the rooftop, but the office building does not become a base station because it merely houses one.

In contrast, consider a monopine that supports antennas from two different wireless providers with a single equipment shelter adjacent to the monopine to house the radios and other equipment for each provider. In this case, the monopine constitutes the "wireless tower" because it was built solely to support wireless antennas. And in this case, although this site involves one tower and one equipment shelter, it hosts two base stations (one for each provider).

The examples above illustrate that a base station is not only distinct from the tower, but that it is distinct from the places that wireless carriers install them. A structure or building does not become a base station merely because it houses one, just as a structure or building would not become an air conditioner merely because it supports one on the rooftop. The Commission should interpret the term consistent with these practical realities.

Another troubling aspect of the Commission's proposed definition of the term "base station" is its proposal to consider the recommendation in the *Section 6409(a) PN* that it is reasonable to interpret a "base station" to include a structure that supports or houses an antenna, transceiver, or other associated equipment that constitutes part of a base station under Section 6409(a).[25] The Commission proposes to interpret "'the term wireless tower or base station' . . . to encompass structures that support or house an antenna, transceiver, or other associated equipment that *constitutes part of a base station*, even if they

[25] *See* NPRM, *supra* note 1, at ¶ 109 (citing Wireless Telecommunications Bureau Offers Guidance on Interpretation of Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, *Public Notice*, 28 FCC Rcd. 1, at 3 (released Jan. 25, 2013) [hereinafter "*Section 6409(a) PN*"]).

were not built for the sole or primary purpose of providing such support."[26]

That such an odd construction of Section 6409(a) could lead to absurd results in the real world is currently on display in the Superior Court of the City and County of San Francisco. In a pending lawsuit that just completed a trial by the Court, plaintiffs T-Mobile, Crown Castle, and ExteNet challenged a city ordinance that requires city-issued permits to install wireless facilities on utility poles in the public rights-of-way.[27] The ordinance also requires a permit to modify facilities after they are initially permitted.

During a recent deposition connected with that trial, a senior T-Mobile engineer who was testifying as an expert witness for all of the plaintiffs testified that in his opinion the term "base station" means "any part of a base station." He then testified that, although a DAS node is not a base station unto itself, it is a "spatially separate" *part* of base station and therefore falls within the ambit of Section 6409(a). He further discussed how T-Mobile installs fiber optic lines on existing utility poles to connect its DAS nodes to the three T-Mobile hubs in San Francisco. According to the T-Mobile expert, a DAS node—miles away from the T-Mobile hub and physically interconnected only via a strand of fiber optic cable—constitutes part of the base station. For that reason, San Francisco would have to approve a request to install antennas or other equipment on each of those utility poles, provided the proposed equipment did not substantially change the physical dimensions of the structure.[28] At the logical extreme of T-Mobile's definition, any object that touches part of the telephone or electrical utility lines connected to a wireless facility would also constitute a base station that a wireless carrier could collocate on as a matter of right. The Commission must refine and narrow its proposed concept of a base station to prevent such absurd results, and needless litigation.

B. "Collocation" for the Purposes of Section 6409(a) Only Applies to Towers that Actually—Not Merely Could—Support or House Wireless Facilities

The Commission should not define "collocation" for the purposes of Section 6409(a) as "the

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[26] *See id.*

[27] A copy of Article 25 of the San Francisco Public Works Code is attached hereto as Exhibit __ to these comments.

[28] A copy of the relevant excerpts from the deposition of Mr. Daniel Paul taken on December 19, 2013 in *T-Mobile West Corp. v. City and County of San Francisco* is attached hereto as Exhibit __ to these comments.

mounting or installation of an antenna on an existing tower, building or structure for the purpose of transmitting and/or receiving radio frequency signals for communication purposes," as proposed in the NPRM.[29] Under this view, with errant support from Verizon Wireless, Section 6409(a) would require State and local governments to approve a permit request to place wireless transmission equipment in or on anything that *could* house or support any component of a base station.[30] Instead, the Commission should find, consistent with common usage and Congressional intent, that Section 6409(a) only applies to wireless towers or other structures that actually support or house *existing* wireless communication facilities.

The principal fact that distinguishes a new site from a collocated site is whether the structure currently hosts a wireless communication facilities. A wireless provider constructs a new site where no other provider currently operates, and it collocates its wireless equipment where one or more other providers already operate.

The Commission's proposed rule would eviscerate legitimate local land use authority preserved under Section 6409(a) because it will allow wireless providers to masquerade new sites as collocations. As the Commission noted, many structures offer convenient support for new antennas.[31] The proposed rule would sweep all new facilities on those structures within the ambit of Section 6409(a) and therefore outside the reach of a rational discretionary process that could allow for a more reasoned and thoughtful deployment of wireless facilities consistent with local zoning requirements.

Verizon also asserts that Section 6409(a) should somehow apply to any structure, regardless of whether it currently supports wireless equipment.[32] This argument ignores the limited sense in which the Commission presently defines a tower and, more importantly, Congressional intent that "wireless towers"

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[29] *See* NPRM, *supra* note 1, at ¶ 113.

[30] *See* IAC NO. 13, *supra* note 13, at 6; *see also* Letter from Tamara Preiss, Verizon Wireless, to Marlene H. Dortch, FCC (May 14, 2013) (on file with the FCC).

[31] *See* NPRM, *supra* note 1, at ¶ 113.

[32] *See* Letter from Tamara Preiss, Verizon Wireless, to Marlene H. Dortch, FCC (May 14, 2013) (on file with the FCC); *see also* NPRM, *supra* note 1, at ¶ 111.

mean a purpose-built structure that actually support wireless antennas.[33] Just how a structure without wireless equipment could constitute an "existing wireless tower or base station" escapes California Local Governments, but this impossibility should not escape the Commission.

II. THE COMMISSION SHOULD CONFIRM LOCAL AUTHORITY TO DEFINE A SUBSTANTIAL CHANGE RATHER THAN ADOPT AN UNWORKABLE NATIONAL STANDARD

The Commission also seeks comments on whether to promulgate a standard for what constitutes a "substantial change" to a wireless tower or base station.[34] Any potential rules should allow local authorities to define what constitutes a substantial change in the context of their local communities, local needs, and local values.

A. Local Governments Should Define Non-Prohibitory Standards for a Substantial Change Because the Issue Does Not Lend Itself to a National Standard

Local authorities should retain their traditional authority to determine whether a particular eligible facilities request will substantially change the physical dimensions of an existing wireless tower or base station. Whether a given carrier's collocation, removal, or replacement of transmission equipment amounts to a substantial change depends on the character and circumstances of a particular wireless tower or base station. The issue does not lend itself to a national standard or centralized control, and the Commission should therefore exercise regulatory restraint if it wants to avoid becoming the national zoning board.

The Telecom Act reflects the careful balance between policies to promote facilities-based infrastructure and equally important land-use and public-safety priorities. Although the Commission may be well-suited to address the needs of wireless services providers, it should recognize that it lacks the expertise and the resources to appropriately and adequately evaluate the unique and individual needs of more than 30,000 local communities that host these facilities. The Commission should allow local agencies to reasonably control the issues within their expertise, experience, and values.

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[33] *See supra*, Part I.A.3., and accompanying text.

[34] *See* NPRM, *supra* note 1, at ¶ 116.

Rational regulatory restraint in this matter will not leave catastrophic gaps in the wireless siting statutory scheme. Local authorities would continue to define what constitutes a substantial change in their communities. The same substantive limits on local authority would apply; the local authorities could not define a substantial change in a prohibitory, effectively prohibitory, or unreasonably discriminatory manner.[35] The same procedural limits on local tribunals would apply; permit denials would require a written decision based on substantial evidence in the record.[36] The same remedial checks on local authority would apply; aggrieved parties could still challenge local approaches on both substantive and procedural grounds.[37]

As a practical matter, the Commission should also bear in mind that how it defines a substantial change will indirectly affect the process to permit new wireless communication facilities.[38] Should the Commission eliminate local control over changes to existing wireless communication facilities, local communities will naturally grow more hostile towards new facilities that they will eventually lose control over. Elected local officials will be left to explain at public meetings that the federal government imposed a federal program for the local officials to implement and took their local decisionmaking out of their hands. In plain terms: the more draconian the federal rules, the more local communities will likely resist new wireless facilities.

B. The Informal Guidance Test Entirely Fails to Consider Several Important Aspects of a Substantial Change in Physical Dimensions and Contains Loopholes that Undermine Any Actual Limits

The Commission seeks comment on whether it should adopt the test articulated by the Wireless Telecommunications Bureau ("Informal Guidance Test") and whether it should refine any of its aspects.[39] A federal agency must consider all the important aspects of a problem when it promulgates a legislative

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[35] *See* 47 U.S.C. §§ 332(c)(7)(B)(i), 332(c)(7)(B)(iv).

[36] *See id.* §§ 332(c)(7)(B)(ii)–(iii).

[37] *See id.* § 332(c)(7)(B)(v).

[38] *See* IAC NO. 13, *supra* note 13, at 5 (describing "unintended consequences" of the proposed rules).

[39] *See* NPRM, *supra* note 1, at ¶ 119; *see also Section 6409(a) PN*, *supra* note 25 1 (released Jan. 25, 2013).

rule.[40] As an initial matter, Congress chose not to adopt the Informal Guidance Test when it chose not to incorporate its standards into Section 6409(a). Additionally, the Informal Guidance Test entirely fails to consider (1) physically small changes that produce legally substantial problems and (2) all the measures within the plain meaning of the term "physical dimensions." Additionally, the test includes several substantial loopholes and shortfalls that render any limits in the Commission's proposed rules merely illusory.

1. Congress Did Not Intend to Incorporate the Informal Guidance Test into Section 6409(a)

The significant textual differences in the Informal Guidance Test, when juxtaposed with Section 6409(a), indicates that Congress did not intend to adopt that test into that statute. The Informal Guidance Test uses the defined phrase "substantial increase in the *size* of the tower"—a phrase that does not exist in Section 6409(a).[41] Instead, Congress used "substantially change the *physical dimensions* of the tower or base station."[42] If Congress intended to incorporate the Informal Guidance Test into Section 6409(a), Congress could have done so either by quoting the definition found in the Informal Guidance Test or using the exact same defined phrase. Congress did not, and since it is presumed that Congress is aware of FCC regulations, the Commission should therefore conclude that Congress meant something different from the Informal Guidance Test.

2. The Informal Guidance Test Does Not Account for Circumstances When Physically Small Changes Produce Legally Substantial Problems Because They Violate Generally Applicable Laws

Even a relatively small change can constitute a substantial one when it threatens to harm public safety or otherwise violates a general law.[43] The Commission should not adopt the Informal Guidance Test because it does not account for circumstances in which the applicant proposes a relatively small

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[40] *See Motor Vehicle Manufactures' Ass'n of the U.S. v. State Farm Mutual Auto Insurance Co.*, 463 U.S. 29, 44 (1983).

[41] *Compare* 47 U.S.C. § 1455(a) (emphasis added), *with Section 6409(a) PN*, *supra* note 25 (emphasis added).

[42] *See* 47 U.S.C. § 1455(a).

[43] *See* IAC NO. 13, *supra* note 13, at 5 ("Any change in physical dimensions that would (1) violate a building or safety code; (2) violate a federal law or regulation . . . ; or (3) violate the conditions of approval under which the site construction was initially authorized, should be considered a substantial change in the physical dimensions.").

change that could nevertheless cause a substantial impact.

General zoning and building codes exist not only to protect the aesthetics of a community, but to protect the lives and property of the public. In the context of wireless sites, overbuilt towers and pole attachments can cause severe damage, as happened in 2007 in California when a utility pole overloaded with wireless transmission equipment collapsed and started a fire that ravaged nearly 4,000 acres and caused millions of dollars in property damage.[44] The Informal Guidance Test would bind the hands of local officials to prevent such dangerous overbuilding construction.

Two hypothetical examples further illustrate this issue. First, consider a 50-foot-tall tower separated 55 feet from the nearest structure in a commercial zone with a 70-foot height limit and a required 110% fall zone setback. An increase in the height of the tower would not violate the Informal Guidance Test or the zone limit, but would encroach into the fall zone and violate a law designed to protect public safety. Next, consider a 50-foot-tall tower 200 feet from the nearest structure in a zone with no height limit for wireless towers. A wireless carrier requests a permit to collocate on the tower with additional antennas mounted at the same height as the current antennas, but the structural analysis of the tower indicates that the additional weight will violate wind-load standards in TIA-222 Revision G.[45]

In both of these examples, a permissible change under the Informal Guidance Test would significantly threaten public health and safety. The Commission should not adopt the Informal Guidance Test because it entirely fails to capture these kinds of substantial changes to the physical dimensions of a wireless tower or base station.

3. The Informal Guidance Test Does Not Reflect the Plain Words in Section 6409(a) Because It Does Not Account for All "Physical Dimensions"

In its current form, the Informal Guidance Test only considers changes in height, width, number

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[44] *See* Melissa Caskey, *CPUC Approves $51.5-Million Malibu Canyon Fire Settlement*, MALIBU TIMES (Sep. 23, 2013), *available at* http://www.malibutimes.com/news/article_3d62067a-2175-11e3-86b6-001a4bcf887a.html.

[45] *See, e.g.*, *Cell Tower Near Ski Resort Collapses in High Winds*, SPOKESMAN-REVIEW (Jan. 13, 2014), *available at* http://www.spokesman.com/stories/2014/jan/13/in-brief-cell-tower-near-ski-resort-collapses-in/ (describing a cell tower that fell onto a nearby house in high winds).

of equipment cabinets, and footprint.[46] Congress expressly intended to capture more than this limited formula when it chose the expansive term, "physical dimensions," as the point of reference for a substantial change.[47] At a minimum, the Commission should afford the term its plain meaning and include (1) height, (2) width, (3) depth, (4) volume, (5) surface area, (6) weight, and (7) visual impact.[48]

4. Loopholes for "Interference" and "Inclement Weather" Threaten to Eviscerate Any Practical Limits on a Substantial Change Under the Informal Guidance Test

In addition to an unreasonably narrow view of the terms "substantial" and "physical dimensions," the Informal Guidance Test also contains arbitrarily broad exceptions that would permit carriers to expand their facilities to heights and widths greater than the prescribed limits based on claims of interference or the need to protect their facilities from inclement weather.[49] The Commission should close these loopholes because (1) Congress explicitly limited the degree to which carriers could expand and (2) exceptions for interference and inclement weather threaten to eviscerate any practical limit on how much a carrier can expand their facilities.

Under the Informal Guidance Test, for example, the height and width limits do not apply when the carrier seeking to collocate its facilities identifies the need for additional space to avoid interference or shelter the antennas from inclement weather.[50] These issues pose technically complex and fact-intensive questions that many local governments cannot resolve without the aid of technical experts. Moreover, the facts that would support or refute these claims reside in the hands of the wireless applicants—the party that would benefit from groundless or even false claims of interference or risk of weather damages. A local government that cannot independently evaluate such claims, afford an advisor, or even retain one within the limited review period forecloses the opportunity to explore a smaller or less intrusive wireless

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[46] *See Section 6409(a) PN*, *supra* note 25.

[47] *See* 47 U.S.C. § 1455(a).

[48] *See* IAC NO. 13, *supra* note 13, at 5 ("A change in physical dimensions, whether it is height, weight, bulk, or visual impact, must be considered.").

[49] *See* NPRM, *supra* note 1, at ¶ 118.

[50] *See id.* at ¶ 118.

facility.

C. Any Rule Must Include a Cumulative Limit to Prevent a Series of Small Changes that Cumulatively Result in a Substantial Change the Tower or Base Station

The Informal Guidance Test also encourages "tower creep," a scenario where a wireless service provider could achieve whatever size facility it desires through a series of successive changes to its wireless tower or base station.[51] Any potential rule should include a cumulative limit because Congress expressly did not intend to limit local authority over substantial changes to a wireless tower or base station that could result from successive insubstantial changes.[52]

A cumulative limit should be placed as an invisible boundary on each and every dimension of the wireless tower or base station, but not necessarily as a limit on the number of changes a wireless service provider may request within that cumulative limit. This balance allows wireless service providers to modify and upgrade their wireless facilities as many times as they please so long as the changes do not expand the tower or base station beyond a rational limit.

III. THE COMMISSION MUST NARROWLY INTERPRET THE PREEMPTIVE EFFECT ON LOCAL AUTHORITY

Tension between the Commission's obligations and local land use control lies at the heart of the Section 6409(a) debate. The Commission must narrowly interpret the preemptive effect of Section 6409(a) on other aspects of State and local governments' legitimate land use authority.

A. The Commission Correctly Acknowledged that Section 6409(a) Does Not Regulate State or Local Governments Acting in a Proprietary Capacity

As the Commission proposed to correctly interpret, Section 6409(a) does not impair the property rights of State and local governments.[53] Congress intended to affect local land use policies, rather than to abrogate governmental property rights. Moreover, a statute that forces State and local governments to approve new or expanded tenancies on their real property would raise serious Fifth Amendment Takings

[51] *See id.* at ¶ 120 (recognizing at least the theoretical problem of tower creep).

[52] *See* 47 U.S.C. § 1455(a).

[53] *See* NPRM, *supra* note 1, at ¶ 129.

Clause issues.[54] California Local Governments also caution the Commission not to attempt to craft a rule that distinguishes regulatory and proprietary capacities because it should leave those difficult constitutional questions to the courts.[55]

B. The Commission Need Not Wade into the Constitutionally Questionable Local Preemption Issues So Long as It Defines a Substantial Change to Include Changes that Violate Generally Applicable Laws

The Commission sought comment on the extent to which Section 6409(a) requires State and local government to approve a permit request that violates, for example, land use codes and other generally applicable laws related to public health and safety.[56] This question implicates serious constitutional questions best left to the courts, but which the Commission can handily avoid so long as it defines a substantial change to include any change that violates a generally applicable law.

Whether a federal agency may constitutionally adopt a rule that requires State and local governments to approve a permit for a wireless facility that endangers public safety raises serious federalism concerns. In order for the Commission to preempt local police powers, especially in the area of public health and safety, there must be "clear and manifest Congressional intent."[57] No such "clear and manifest congressional intent" exists in Section 6409(a). Moreover, the courts construe such preemptive intent as narrowly as possible.[58]

Although Section 6409(a) includes the words "[n]otwithstanding . . . any other provision or law," a rule that preempts all local authority to enforce all generally applicable laws under its traditional police powers would not be the narrowest possible construction.[59] Rather, the narrower and more appropriate construction would find that Congress intended Section 6409(a) to very narrowly preempt the local

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[54] *See United States v. 50 Acres of Land*, 469 U.S. 24, 31 (1984) (construing "private property" under the Fifth Amendment to include State and local government property when the federal government condemns it).

[55] *See* NPRM, *supra* note 1, at ¶ 129.

[56] *See id.* at ¶ 125.

[57] *See Wyeth v. Levine*, 555 U.S. 555, 565 (2009).

[58] *See, e.g., Bates v. Dow Agrosciences LLC*, 544 U.S. 431 (2005); *Cipollone v. Liggett Group, Inc.*, 505 U.S. 504 (1992) (holding that some state damage claims were preempted and others were not).

[59] *See* 47 U.S.C. § 1455(a)(1).

authority to deny a permit to modify, remove, or collocate wireless equipment on a lawfully existing wireless tower or base station only when the proposed changes would result in a structurally and legally *de minimis* change.[60]

To avoid this quagmire altogether and promote rational wireless policies, the Commission should clarify that any proposed change that violates a generally applicable law constitutes a substantial change. As discussed above, even small physical changes can create substantial land use issues. If the Commission required State and local governments to approve unsafe and otherwise illegal wireless facilities, it would only exacerbate those local land use issues and the already problematic constitutional questions.

The Commission should interpret a substantial change to include whether the change would violate a law. This approach would narrowly construe the statute to avoid the constitutional questions and provide a clear path for wireless service providers to collocate, remove, or replace their transmission equipment in a safe, legal, and reasonable manner.

IV. THE COMMISSION SHOULD NOT IMPOSE ANY PROCEDURAL RULES OR LIMITS ON PERMIT APPLICATIONS BECAUSE SECTION 6409(A) MANDATES A RESULT BUT NOT A PROCESS

As the Commission correctly recognized in the NPRM, the mandate to approve certain eligible facilities requests presupposes that the wireless provider would memorialize the request in a permit application.[61] The Commission should also acknowledge that the plain terms of Section 6409(a) mandate a particular result, but not any particular process to achieve that result.[62] Section 6409(a) on its face does not invite the Commission to impose rules on the permit application and review process.[63] The following subsections respond to some of the fundamental application and review process issues raised in the

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[60] *See* NPRM, *supra* note 1, at ¶ 47; IAC NO. 13, *supra* note 13, at 4.

[61] *See* NPRM, *supra* note 1, at ¶ 131; [cite to informal guidance]; *see also McKay Brothers, LLC v. Zoning Bd. of Adjustment of Tp. of Randolph* (JLL), 13cv1383, 2013 WL 1621360, *3 (D.N.J. Apr. 12, 2013) (observing that Section 6409(a) placed the Zoning Board of Adjustment in an initial factfinder role).

[62] *See* 47 U.S.C. § 1455(a).

[63] *See* NPRM, *supra* note 1, at ¶ 132; *see also* IAC NO. 13, *supra* note 13, at 6.

NPRM.

A. Section 6409(a) Does Not Require a Ministerial Permit Review Process

The NPRM sought comment on whether the Commission should limit permit review to administrative staff rather than an elected board or commission.[64] Not a single word in the statute requires a State or local government to enact a ministerial review process or, for that matter, any other process. No record before the Commission supports such a rule. Moreover, a mandatory ministerial review process would naturally limit public notice and opportunity to participate in municipal business. The Commission should not entertain any proposals to dictate how a State or local government processes a Section 6409(a) request.

B. The Commission Should Not Limit the Content of Permit Applications Because Local Authorities Need Sufficiently Detailed Disclosures to Fulfill Their Initial Factfinder Role Under Federal Law

The Commission sought comment on whether Section 6409(a) requires local authorities to act as the initial factfinders and determine whether a permit request (1) qualifies as an eligible facilities request, (2) will substantially change the physical dimensions of the wireless tower or base station, and (3) implicates any environmental or historic concerns.[65] To determine these factual issues and evaluate whether the carriers comply with the local requirements, the local authorities often require wireless service providers to submit necessary disclosures designed to allow the local reviewers to evaluate the applicable legal requirements.

In general, the Commission tends to favor more flexible rules when the local authority must act as a factfinder. Just as a State or local government may require data to determine whether a proposed facility will comply with the FCC Rules, local authorities must require disclosures about the scope of the

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[64] *See* NPRM, *supra* note 1, at ¶ 132.

[65] *See McKay Brothers, LLC v. Zoning Bd. of Adjustment of Tp. of Randolph*, 13cv1383 (JLL), 2013 WL 1621360, *3 (D.N.J. Apr. 12, 2013) (noting that "the [local authority] would have to determine whether the installation of the antennae would 'substantially change the physical dimensions' of the lattice tower in which Plaintiff seeks to install the antennae. *See* 47 U.S.C. § 1455(a).").

proposed project to determine whether it actually falls under Section 6409(a).[66] The Commission should reaffirm that State and local governments may legitimately seek information from the carriers to perform their factfinding duties and to confirm compliance with legal requirements in the wireless siting process.

C. The Commission Should Not Limit Permit Review Fees Because Congress Intended to Streamline—Not Subsidize—Small Changes to Wireless Towers and Base Stations

The Commission seeks comment on whether Section 6409(a) warrants any new federal limits in wireless permit review fees.[67] The new review burdens that Section 6409(a) imposes on local authorities will necessarily create new review costs for State and local governments. Although Section 6409(a) may obviate some review costs, it does not eliminate them and nothing in the statute requires local authorities to internalize permit fees as an effective subsidy to wireless service providers. Moreover, any new limit that forces localities to expend more than they can recover from a wireless applicant would constitute an impermissible unfunded mandate to shift the costs of a federal program onto State and local governments.[68]

V. TIME LIMITS ON 6409(A) REVIEW

A. The *2009 Declaratory Ruling* Does Not Apply to All Covered Requests Because Presumptively Reasonable Review Periods Apply Only to Personal Wireless Services Facilities

As a threshold matter, the Commission should recognize that (1) it proposes to expand the scope of Section 6409(a) to wireless services beyond the reach of the *2009 Declaratory Ruling*, and (2) Section 6409(a) does not impose any limit on the time to review covered requests not related to personal wireless

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[66] *See, e.g., New York SMSA Limited Partnership v. Town of Clarkstown*, 603 F. Supp. 2d 715, 730–31 (S.D.N.Y. 2009) (holding that a municipality may legislatively use radiofrequency data to determine whether a proposed facility will comply with the FCC Rules); *see also* 47 C.F.R. § 1.1307 *et seq.*; In the Matter of Procedures for Reviewing Requests for Relief from State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934, *Report and Order*, 15 FCC Rcd. 22821, 22825–26, ¶ 11 (adopted Nov. 13, 2000) (declining to adopt a rigid standard to govern the kind and amount of data a State or local government may require to [hereinafter "*RF Procedures Order*"].

[67] *See* NPRM, *supra* note 1, at ¶ 131 (inquiring "whether . . . section 6409(a) permits and warrants Federal limits on applicable fees").

[68] *See generally* Unfunded Mandates Reform Act of 1995, Pub. L. No. 104-4, 109 Stat. 48.

services.[69]

Section 332(c)(7) requires State and local governments to act within a "reasonable time" on permit requests related to only "personal wireless service" facilities.[70] However, the NPRM proposes to broaden the scope of Section 6409(a) to include facilities for all "wireless" services.[71] Thus, whether any presumptively reasonable time for review applies depends on whether the covered request seeks to provide personal wireless services or some other wireless service.

Alternatively, the Commission should find that Section 6409(a) applies only to personal wireless services as defined in Section 332(c)(7)(C)(i). This approach would harmonize the scope and intent of Section 6409(a) with Section 332(c)(7), and obviate the need for local governments to determine whether some presumptively reasonable review period applies to the proposed service.

B. Covered Requests Require More Time for Review Because They Add a New and Different Layer of Analysis to the Permit Process

The Commission should not adopt a shorter presumptively reasonable time for review because (1) no fully developed factual record exists to show that Section 6409(a) review subjects applicants to unreasonable delays and (2) the plain terms of that statute require local governments to act as factfinders on complex and technical issues.

Section 6409(a) already imposes new burdens on State and local governments, and the Commission should not pile on additional hardships without a clear factual basis in a fully developed record. Unlike the factual record attached to the *2009 Declaratory Ruling*, no factual record exists to show any need for a federal rule in this instance. Moreover, in the nearly two years since Congress enacted Section 6409(a), only three known court decisions even address the statute and none found it dispositive.[72] Simply no real-world evidence supports the need for a shorter review period.

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[69] *See* NPRM, *supra* note 1, at ¶¶ 103–04 (proposing not to limit the term "wireless" to "personal wireless services" as defines in Section 332(c)(7)(C)(i) of the Telecom Act).

[70] *See* 47 U.S.C. § 332(c)(7)(B).

[71] *See* NPRM, *supra* note 1, at ¶¶ 103–04.

[72] *See New Cingular Wireless PCS, LLC v. City of West Haven*, No. 3:11cv1967 (MPS), 2013 WL 3458069, *8 (D. Conn. July 9, 2013) (noting in *dicta* that Section 6409(a) "buttressed" the order to grant a wireless permit, but did (continued....)

The Commission found in the *2009 Declaratory Ruling* that a State or local government could reasonably process a collocation request within ninety days.[73] However, Section 6409(a) requires additional time because it requires the permit authority to perform new factual inquiries not previously part of the permit review process, such as whether the applicant submitted an eligible facilities request and whether the proposed design will substantially change the physical dimensions of the wireless tower or base station.[74] Additionally, if the Commission adopts the proposed broader definition of "wireless," State and local governments will now likely require a process to distinguish more generic "wireless" providers from the more specific "personal wireless services" providers.

The necessary time for review becomes even longer under the proposed Informal Guidance Test because local governments will presumably need to evaluate complex technical claims that a wireless provider requires additional height or width to avoid interference or inclement weather.[75] In such a case, a shorter presumptively reasonable review period to complete a more difficult analysis would force State and local governments to afford preferential status to wireless permit requests—a result the Commission explicitly attempted to avoid in the *2009 Declaratory Ruling*.[76] The Commission should not adopt any shorter review periods than it established in the *2009 Declaratory Ruling*.

C. The Rules Must Toll the Presumptively Reasonable Review Period When an Applicant Submits an Incomplete Application, the Parties Mutually Consent to Extend the Review Period, or the Municipality Enacts a Moratorium to Tailor its Process to New Federal Laws

Regardless of any procedural rules the Commission decides to adopt, to allow for a meaningful review, the rule must toll the presumptively reasonable review period when (1) an applicant submits an

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not retroactively apply to the case); *Hempstead*, 2013 WL 1148898, at *6; *McKay Bros.*, 2013 WL 1621360, at *3 (holding that a cause of action under 6409(a) was not ripe for review because the plaintiff did not exhaust its administrative remedies).

[73] *See* In the Matter of Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposal as Requiring a Variance, *Declaratory Ruling*, 24 FCC Rcd. 13994, 14012, ¶ 46 (adopted Nov. 18, 2009) [hereinafter "*2009 Declaratory Ruling*"].

[74] *See McKay Bros.*, 2013 WL 1621360, at *3.

[75] *See supra*, Part II.B.4, and accompanying text.

[76] *See 2009 Declaratory Ruling*, *supra* note 73, at 14010–11, ¶ 42.

incomplete application, (2) the parties mutually consent to extend the review period, or (3) the municipality enacts a temporary moratorium to amend or otherwise revise its permit review process, rules, and policies.

The Commission noted in its *2009 Declaratory Ruling* that wireless applicants must submit complete permit applications to allow the municipality a fair opportunity to review the request.[77] Similarly, the Commission cannot fairly expect municipalities to determine whether Section 6409(a) applies *and* conduct its normal review without a complete application. Any other rule would provide applicants with the perverse incentive to masquerade all its applications as Section 6409(a)-covered requests without any substantive facts to verify the claim and then simply wait for the clock to expire, especially when coupled with a potential deemed-granted remedy.[78] Such strong-but-perverse incentives frustrate the Commission's consistent goal to foster cooperative partnerships between governments and the wireless carriers.

To allow local authorities an opportunity to fulfill its role as the initial factfinder, and to discourage applicants who would game the process, the Commission should adopt a rule that tolls the review period when the municipality notifies the applicant within a reasonable time that it submitted an incomplete application.

California Local Governments also recognizes that the rules must protect applicants against "last minute" denials on the basis of incompleteness.[79] Consistent with the *2009 Declaratory Ruling*, the Commission should apply the thirty-day notice period for incomplete applications to Section 6409(a).[80]

At the same time, the Commission should adopt the rule from its *2009 Declaratory Ruling* that permits the parties to extend the time for review through mutual consent to foster cooperative partnerships

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[77] *See id.* at 14014.

[78] *See* NPRM, *supra* note 1, at ¶ 137; *see also infra* VI (discussing the problems associated with the proposed "deemed granted" remedy).

[79] *See 2009 Declaratory Ruling*, *supra* note 73, at 14014–15, ¶¶ 52–53.

[80] *See id.* at 14015, ¶ 53.

between wireless applicants and local authorities.[81] In that order, the Commission acknowledged that the rules should allow the government and industry to mutually toll the review period because the facts and circumstances can vary greatly among each wireless permit request.[82] A rigid rule that forced governments and industry out of a cooperative and into an adversarial context would therefore harm the public interest and frustrate Congressional intent.[83]

Lastly, the Commission should toll the time for review when a municipality enacts a temporary moratorium to revise its permit process, rules, and policies because Section 6409(a) fundamentally changes the way local authorities must approach wireless siting.

VI. THE COMMISSION SHOULD NOT IMPOSE A DEEMED-GRANTED REMEDY

A. Section 332(c)(7)(v) of the Telecom Act Already Provides an Expedited Remedy

Section 6409(a) does not allow for a deemed-granted remedy. Any suggestion that it does directly conflicts with the express Congressional intent to allow federal courts to craft individualized remedies based on the unique facts and circumstances of each wireless-facilities dispute.[84]

A federal agency may interpret a statute only when (1) the statute contains some gap or ambiguity that Congress intended the agency to resolve and (2) the agency does not construe the statute arbitrarily, capriciously, or manifestly contrary to Congressional intent.[85] Although it appears that the rule proscribes agency authority to interpret a rule at all when no gap or ambiguity exists, the Supreme Court recently clarified in *City of Arlington v. FCC* that a court always reviews whether the agency went beyond what Congress permitted it to do.[86]

Congress already provided an adequate and efficient remedy for when a State or local

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[81] *See id.* at 14013, ¶ 49.

[82] *See id.* at 14009, ¶ 39.

[83] *See id.* at 14013, ¶ 49.

[84] *See* 47 U.S.C. § 332(c)(7)(B)(v); *2009 Declaratory Ruling*, *supra* note 73, at 14009, ¶ 39 (rejecting a deemed granted remedy for a failure to act because it would frustrate the "Congressional intent that courts should have the responsibility to fashion appropriate case-specific remedies").

[85] *See Chevron U.S.A., Inc. v. Nat'l Resources Defense Council, Inc.*, 467 U.S. 837, at 842 (1984).

[86] *See City of Arlington, Tex. v. FCC*, 133 S.Ct. 1863, 1868–69 (2013).

government allegedly fails to act or improperly denies a permit request for a wireless facility.[87] Congress did not specify the remedy for a "failure to act" or an "impermissible denial" because the current remedy in Section 332(c)(7)(B)(v) already affords "expedited" relief.[88] Indeed, the one district court that already dealt with a Section 6409(a) claim disposed of the matter within 36 days.[89] Nothing in Section 6409(a) or the record before the Commission warrants a different remedy, and the Commission should not go beyond the already adequate and efficient judicial remedy.

B. A Deemed Granted Remedy Exacerbates the Questionable Constitutionality of Section 6409(a) Under the Tenth Amendment

Even when Congress may constitutionally regulate a subject matter, a statute may violate the Tenth Amendment and principles of federalism.[90] A court will invalidate a law when it compels the States or their officials to enact or enforce a federal regulatory program.[91]

The Constitution generally contemplates that a representative form of government, not necessarily judicial review, protects the States' rights under the Tenth Amendment.[92] However, the Court must intervene when a federal statute (1) directly regulates the States or their officials rather than control through a generally applicable law and thus (2) allows the federal government to avoid political accountability.[93]

The Supreme Court of the United States in *Printz v. United States* and in *New York v. United States* struck down federal statutes that coerced state officials to facilitate a politically unpopular federal program under threat of a federal punishment because the laws violated State sovereignty.[94] The law in

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[87] *See* 47 U.S.C. § 332(c)(7)(B)(v).

[88] *See id.*.

[89] *See McKay Bros.*, 2013 WL 1621360, at *4.

[90] *See Printz v. United States*, 521 U.S. 898, 933–34 (1997); *New York v. United States*, 505 U.S. 144, 188 (1992); *see also Reno v. Condon*, 528 U.S. 141, 149 (2000).

[91] *See New York*, 505 U.S. at 188.

[92] *See South Carolina v. Baker*, 485 U.S. 505, 512 (1988); *Garcia v. San Antonio Metro. Transit Authority*, 469 U.S. 528, 550–52, 556 (1985).

[93] *See New York*, 505 U.S. at 160, 168.

[94] *See Printz*, 521 U.S. at 933–34 (1997); *New York*, 505 U.S. at 188.

Printz, which obliged local law enforcement officials to perform background checks on handgun purchases, and the law in *New York*, which forced States to implement nuclear waste disposal programs, violated the Tenth Amendment because they both pressed States into federal service and blurred the lines of political accountability—undermining the structure of government to protect States' rights.

Here, Section 6409(a) mirrors the unconstitutionally coercive laws struck down in *Printz* and *New York* because it compels State and local officials to administer a federal wireless deployment program. Just as the federal law in *Printz* required State law enforcement officers to perform background checks and the law in *New York* required States to enact a nuclear waste disposal program, Section 6409(a) directly regulates the States because it compels State officials to approve covered requests.[95] Just as the federal laws in *Printz* and *New York* required local governments to administer or enact what may be politically unpopular programs, Section 6409(a) forces local governments to shepherd politically unpopular permits through the land use process. Thus, Section 6409(a) appears to fall on the unconstitutional side of the line drawn in *Printz* and *New York*.

The deemed-granted remedy considered in the NPRM pushes Section 6409(a) even farther to the unconstitutional side of the spectrum because it blurs the lines of political accountability between communities and their local government representatives.[96] Wireless land use permits can create substantial controversy in many instances and often force politically unpopular choices. Aggrieved local communities will not likely blame Congress or the Commission for their wireless woes; they will blame the local officials they believe approved the permit, or at least did not block the approval. The political accountability problem will become especially acute in the event the Commission requires mere ministerial review without a public notice or hearing.[97] Section 6409(a) will likely face a constitutional challenge in the courts, and a deemed granted remedy would only add fodder for the argument that the statute forces States and their instrumentalities to administer a federal program. The Commission should

[95] *See Printz*, 521 U.S. at 933–34 (1997); *New York*, 505 U.S. at 188.

[96] *See* John W. Pestle, *Section 6409(a) of the Middle Class Tax Relief Act is Unconstitutional*, MUNICIPAL LAWYER, Jan. 10, 2013, at 22.

[97] *See supra*, Part IV.A, and accompanying text.

not adopt a deemed granted remedy.

VII. A DECLARATORY RELIEF PROCEDURE IS UNNECESSARY AND INAPPROPRIATE GIVEN THE AVAILABILITY OF MORE ACCESSIBLE COURTS

To enforce Section 6409(a), the Commission proposes to permit aggrieved applicants to petition for declaratory relief.[98] The Commission should not permit aggrieved applicant to petition for declaratory relief because (1) Congress already provided an expedited judicial remedy,[99] (2) the Commission lacks the local expertise to competently adjudicate local disputes, and (3) the proposed procedure places an unreasonable burden on State and local governments.

As discussed above, Congress already provided expedited judicial review for aggrieved applicants.[100] Unlike Section 332(c)(7), which grants a party the right to petition the Commission for denials allegedly based on RF emissions, Section 6409(a) does not contain any evidence that Congress intended to allow an aggrieved applicant to petition the Commission for declaratory relief from any alleged violation of Section 6409(a).[101] Thus, the proposed declaratory relief procedure conflicts with Congress' apparent intent to maintain the status quo for remedies.

Additionally, the Commission inherently lacks the institutional expertise to strike the appropriate balance between the federal interest in facilities deployment and the equally strong countervailing local interests. The current Congressionally-prescribed judicial remedy channels these disputes into the courts, which have the demonstrated ability to fairly evaluate these issues.[102] Moreover, the Commission should carefully consider the burden of its proposal to establish a declaratory ruling process to review Section 6409(a) complaints, and its slippery slope towards its role as a "national zoning board."[103]

Lastly, local governments should not bear the expense to obtain counsel in Washington, D.C. or

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[98] *See* NPRM, *supra* note 1, at ¶ 142.

[99] *See* 47 U.S.C. § 332(c)(7)(B)(v).

[100] *See id.*

[101] *See id.*

[102] *See* IAC NO. 13, *supra* note 13, at 2, 5, 8.

[103] *See* NPRM, *supra* note 1, at ¶ 142; *see also* IAC NO. 13, *supra* note 13, at 4–5.

travel long distances to defend a local land use dispute. These burdens are especially unreasonable given the lack of explicit Congressional intent and the availability of more appropriate and more accessible venues in the courts. For all these reasons, the Commission should not permit aggrieved applicants to petition for declaratory relief under Section 6409(a).

The Commission should look to the legislative history of the Telecom Act to understand Congressional intent because Congress enacted Section 6409(a) with virtually no legislative history or debate—much less the kind of legislative history that accompanied the Telecom Act. When the Senate debated Section 253 of the Telecom Act, which regulates the relationship between local governments and carriers in the public right-of-way, Senator Feinstein expressed deep concern over whether the Commission should preside over State-law preemption claims. She stated that:

> [C]ities [would have] to send delegations of city attorneys to Washington to go before a panel of telecommunications specialists at the FCC, on what may be [a] very broad question of state or local government rights. In reality, this preemption provision is an unfunded mandate because it will create major new costs for cities and for states.[104]

Respecting Senator Feinstein's concern, Senator Groton offered an amendment—now law—designed to allow cities to defend preemption claims in local federal district courts. He stated that his amendment "retains not only the right of local communities to deal with their rights-of-way, but their right to meet any challenge on home ground in their local district courts."[105]

Senator Feinstein's concerns in 1995 over Commission authority to hear preemption claims mirror the same concerns in Section 6409(a). Without legislative history to Section 6409(a), there is good reason to apply Senator Feinstein's sound reasoning then to similar issues today. Without an express delegation, such as in Section 332(c)(7)(B)(v), or any supportive legislative history, the Commission should not entertain petitions for declaratory relief on Section 6409(a) claims.

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[104] *See Bell South Telecom., Inc. v. Town of Palm Beach*, 252 F.3d 1169, 1190 (quoting 141 Cong. Rec. S8306 (June 14, 1995) (Statement of Sen. Groton)).

[105] *See Bell South Telecom.*, 252 F.3d at 1190 (quoting 141 Cong. Rec. S8170 (June 12, 1995) (Statement of Sen. Feinstein)).

A. The Commission Should Allow an Adequate Grace Period to Allow State and Local Governments to Adjust to Any New Rules Through Reasonably Temporary Moratoria

The Commission sought public comment on whether it should provide a transition period to allow States and localities time to implement any finally-adopted rules.[106] The Commission should provide local governments with at least twelve months to adjust local land use ordinances, policies, and procedures to reflect any new rules adopted as a result of this NPRM. State and local governments require at least this much time to revise and enact new substantive rules, the Commission routinely provides a transition period, and at least one federal court recently found that any delay would not pose an immediate and substantial hardship to the wireless providers or the public.[107]

The Commission consistently provides State and local governments with a grace period to adjust to new federal rules.[108] In the *2009 Declaratory Ruling*, the Commission allowed a 60-day grace period that began after a wireless applicant notified the permit authority of a failure to act. The proposed rules in the NPRM would fundamentally impact many local ordinances and policies in a way far beyond the effect of the *2009 Declaratory Ruling*. The Commission should provide significantly more time for State and local government to implement such significantly different finally adopted rules.

Moreover, neither wireless providers nor the public will suffer an "immediate and significant hardship" that might justify a shorter grace period.[109] In *McKay Brothers, LLC v. Zoning Bd. of Adjustment of Tp. of Randolph*, a wireless provider sought to compel a township to grant a permit under Section 6409(a) a mere forty-one days after the township returned the application as incomplete. Thirty-eight days later, that federal court denied the complaint and noted that any interrupted deployment would not likely produce such hardship because the process to obtain a land use permit usually includes

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[106] *See* NPRM, *supra* note 1, at ¶ 100.

[107] *See McKay Bros.*, 2013 WL 1621360, at *4.

[108] *See, e.g., 2009 Declaratory Ruling*, *supra* note 73, at 14014, ¶ 51.

[109] *See McKay Bros.*, 2013 WL 1621360, at *4.

delays.[110] Assuming the *2009 Declaratory Ruling* applied to that application, the township would receive an additional 90 days to process the permit request, and thus the judge effectively found no hardship when the wireless provider must wait at least 169 days for a permit.

In the interest of fairness and cooperation, and in light of the significant changes to local policies and the absence of any significant hardship to carriers, the Commission should provide State and local governments with at least twelve months to implement any requirements after adoption.

VIII. IMPLEMENTATION OF SECTION 332(C)(7)

A. The Commission Should Globally Interpret "Collocation," for Sections 332(c)(7) and 6409(a), as a Wireless Facility Shared with an Existing Wireless Tower or Wireless Structure

The Commission should read Sections 332(c)(7) and 6409(a) with a holistic, plain language approach, and define "collocation" as a wireless facility placed at a location shared with an existing wireless tower or other wireless structure. This is consistent with the Commission's 1999 interpretation of the term "collocation" as relating to "competitors' equipment" for the purpose of rules implementing local exchange carriers' statutory duty to provide physical or virtual collocation for competitors, through the "Collocation Order."[111] If there is no personal wireless service equipment already at a site, how could a new wireless facility be "collocated" there?

A common sense reading of the term "collocation" avoids conflicting interpretations for the related statutes. If the Commission were to impose conflicting interpretations, it may cause conflicting results between interpretations of what is "collocation of new transmission equipment" under, say, Section 6409(a), with a "collocation application" under the *2009 Declaratory Ruling*. The Commission should adopt a global reading, requiring existing wireless "equipment" at the site.

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[110] *See McKay Bros.*, 2013 WL 1621360, at *4 (citing *Trinity Resources v. Township of Delanco*, 842 F. Supp. 782, 800 (D.N.J. 1984)).

[111] *See* Deployment of Wireline Services Offering Advanced Telecom. Capability ("Collocation Order"), 14 FCC Rcd at 4761 (1999) (interpreting 47 U.S.C. § 251(c)(6) (requirement that incumbents allow collocation by competitors); *GTE Service Corp. v. F.C.C.*, 205 F.3d 416, 424-425 (D.C. Cir. 2000) (noting that "collocation" under Section 251 relates to "competitors' equipment").

B. The Commission Should Confirm Traditional Local Authority to Determine the Completeness of a Wireless Facility Application

The Commission could clarify that an application is complete, for the purposes of the *2009 Declaratory Ruling*, when the State or local government receives an application containing information that is complete to the State's or local government's satisfaction. This would be similar to levels of discretion afforded governmental decisionmakers in, for example, land use applications to the City of Stockton, California,[112] Santa Cruz, California,[113] and National Pollutant Discharge Elimination System ("NPDES") permit applications to the EPA.[114] States and local governments are responsible for processing wireless facility applications, and they are best situated to use their discretion to confirm whether an application is complete.

A recent court decision cited by the Commission in the Notice of Proposed Rulemaking is also instructive in this regard. In *McKay Bros., LLC v. Township of Randolph*,[115] when a carrier was informed to contact a town staff person "for the necessary paperwork," the carrier filed suit in lieu of submitting the required paperwork.[116] 36 days after filing suit, the district court dismissed the carrier's lawsuit because the case was not ripe, and no immediate and significant hardship would result.[117] The court also noted that "[t]he Zoning Board of Adjustment should have the opportunity to consider Plaintiffs' application without premature judicial intervention."[118]

Since the *McKay Bros.* court found no hardship from dismissing the carrier's case before "the necessary paperwork" was submitted, the Commission should similarly avoid premature intervention by regulating municipalities' "necessary paperwork." Congress only imposed a remedy on a "final action or

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[112] Stockton Municipal Code § 16.84.050(A)(1) provides as follows: "The Director shall review the application material to determine if the application is complete."

[113] Santa Cruz Municipal Code § 24.04.052(1) provides as follows: "Staff shall determine whether an application for a development project is complete . . . "

[114] 40 C.F.R. 122.21(e) requires applications to the EPA Director to be "completed to his or her satisfaction."

[115] 2013 WL 1621360 (D. N.J. 2013).

[116] *Id.* at *1.

[117] *Id.* at *4.

[118] *Id.* at *2.

failure to act."[119] The Commission should similarly stay out of such premature intervention into municipalities' discretion to determine whether an application contains the "necessary paperwork."

The Commission should resist the temptation to obfuscate a simple issue that is best left in State and local decisionmakers' hands. The Commission should confirm that municipalities retain their discretion to decide what constitutes a "complete" application.

C. The *2009 Declaratory Ruling* Should Not Run Concurrently with Moratoria Because the Two Principles Should Not be Comingled

The Commission should not apply its *2009 Declaratory Ruling* to run concurrently with moratoria. The relevant purpose of the *2009 Declaratory Ruling* (accelerating the process to decide the application of an individual carrier) is wholly different from the general purpose of moratoria (to study existing regulations and/or develop new regulations, to apply to all carriers). If the Commission erroneously went ahead as it proposes, it would undercut the purpose of moratoria, for the short-term benefit of a few carriers, but to the detriment of all other current and future carriers, and the community-at-large. Therefore, the time periods from the *2009 Declaratory Ruling* should not run during the pendency of moratoria.

Even prior to the *2009 Declaratory Ruling*, the courts, relying on case-specific facts, readily distinguish valid moratoria from invalid moratoria under the "reasonable time" requirement of the Telecommunications Act of 1996. Accordingly, the Commission should not (1) set limits on the length, or maximum cumulative time, of moratoria; nor (2) limit moratoria that were put in place prior to the submission of an application. "There is nothing to suggest that Congress, by requiring action 'within a reasonable period of time,' intended to force government procedures onto a rigid timetable where the circumstances call for study, deliberation, and decision-making among competing applicants."[120] In

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[119] 47 U.S.C. § 332(c)(7)(B)(v).

[120] *Sprint Spectrum, L.P. v. City of Medina*, 924 F.Supp. 1036, 1040 (W.D. Wash 1996) (denying motion for preliminary injunction, and upholding moratorium where city sought time "to deal with an expected flurry of applications")); *Sprint Spectrum, L.P. v. Jefferson County*, 968 F.Supp. 1457, 1466 (N.D. Ala. 1997) (granting petition for declaratory judgment and writ of mandamus, striking down moratorium where county failed to follow state procedural requirements, had already imposed two prior moratoria, and had "not offered a legitimate reason for not processing pending applications under existing regulations, while new amendments are being considered");
(continued....)

multiple instances, the courts have acted within only a few months (and as little as 22 days) from the filing of lawsuits challenging moratoria, by motions alone, without the need for a trial.[121]

The local interests served by moratoria include preserving the status quo to allow for the development of and implementation of a comprehensive plan, or a revision to the existing plan. These needs often arise after an unexpected increase in wireless facility applications, or a change in applicable rules. It would obviously frustrate the purpose of a moratorium if, during the interim period when the new plan is developed, the Commission allowed carriers to evade the new local regulations – and instead permitted carriers to install wireless facilities which might possibly defeat, in whole or in part, the ultimate execution or purpose of new wireless facility regulations.

Additionally, a State or local government's development of new regulations can often serve to clarify the process for all carriers to obtain permits, through a thorough and open discussion among industry, government, and community members. The carrier-specific rights to a speedy local decision on individual applications through the *2009 Declaratory Ruling* should not be confused with the carrier-wide interests (not a right) in seeking the lifting of a moratorium, which is traditionally accompanied by the study of amendments to (or a re-write of) existing regulations. The Commission should not combine these two principles.

At some point, the Commission's effort to clarify the five limitations on local authority of 47 U.S.C. § 332(c)(7)(B), including the "reasonable time" requirement, will only serve to confuse carriers, State and local governments, and members of the public. In 2009, the Commission defined a "reasonable time" by way of its 35-page *2009 Declaratory Ruling*. Following that, in 2013, the Wireless Telecommunications Bureau issued guidance on Section 6409(a) through its five-page *Section 6409(a)*

(Continued from previous page)
Sprint Spectrum, L.P. v. Town of West Seneca, 172 Misc.2d 287, 288, 659 N.Y.S.2d 687 (Sup. 1997) (granting application for preliminary injunction, striking down moratorium adopted "[f]or reasons that [were] not clear in the record. . . ").

[121] *See City of Medina*, 924 F.Supp. at 1039 (decided 22 days after filing of lawsuit); *Jefferson County*, 968 F.Supp. at 1463 (decided 51 days after filing of lawsuit) *Town of West Seneca*, 172 Misc.2d 287, 659 N.Y.S.2d 687 (decided five months after town's adoption of moratorium, lawsuit filing date not stated in the record).

PN. Now, in 2014, the Commission seeks to provide further guidance on these issues through this even larger Notice of Proposed Rulemaking.

Though the Commission is well-intentioned, its efforts may only serve to confuse, not clarify. Therefore, as applied here, the Commission should decline to wade into moratoria waters, instead leaving that as an issue for the courts. Courts have proven the ability to swiftly resolve disputes over moratoria, and on a case-by-case basis.

D. Qualifying DAS Facilities Could be Subject to the *2009 Declaratory Ruling*, if the Commission Adopts the California Local Governments' Proposed Global Definition of "Collocation"

The Commission should harmonize its regulations in this rulemaking. To that end, it could treat qualifying DAS and small cell facilities as subject to the *2009 Declaratory Ruling*, provided that it adopts the California Local Governments' proposed definition of "collocation" for Sections 332(c)(7) and 6409(a), as described above.

Most DAS facilities are placed in the public right-of-way, and are installed on existing light, traffic, and electric poles. None of those poles, at the time of the first DAS installation, host any personal wireless service equipment.

However, under Verizon's misguided proposal, all of these new DAS facilities would qualify for the unreasonably short 90-day review period. On the other hand, under the California Local Governments' proposed global definition of "collocation," these DAS facilities would not be considered "collocated" under either Section 6409(a) or Section 332(c)(7). Applied to the *2009 Declaratory Ruling*, this even-handed approach would permit States and local governments the reasonably-necessary-150-day process for a new DAS facility application, just as they would need to process other new wireless facility applications.

E. Municipal Property Preferences for Wireless Facilities are Reasonable and Necessary

The Commission should decline to act on ordinances establishing preferences for the placement of wireless facilities on municipal property. Such preferences are reasonable and necessary for several reasons.

First, there are many benefits to a municipal property preference, such as the possibility of less land use restrictions on the type of wireless facilities that could be installed, and swifter application and approval processes. In fact, even PCIA, which raised the concern that the Commission is now seeking comment upon, concedes that "the siting on municipal property generally can have many benefits,"[122] such as reducing the aesthetic impact of a facility in an area where it may otherwise be difficult to find a suitable location.

Second, a municipal property preference is not *per se* unreasonably discriminatory. PCIA's comments, raising concerns yet, at the same time, describing the "many benefits" of a municipal property preference, do not, somehow, amount to a *per se* "unreasonably discriminatory" finding by the Commission:

> Congress' command that local authorities "shall not" discriminate indicates that it wants local decisionmakers to consider how their zoning decisions affect the marketplace for communications services. Congress, however, has not placed competition above all local concerns as the Act nonetheless strikes a balance between local zoning power and promotion of free competition. The Act prohibits such local discrimination only if it is "unreasonable."[123]

Finally, where a carrier does claim unreasonable discrimination, the courts are well-equipped to act – on a case-by-case basis. For example, the Fourth Circuit dispensed with an unreasonable discrimination claim where the denial was based

> . . . on traditional bases of zoning regulation: preserving the character of the neighborhood and avoiding aesthetic blight. If such behavior is unreasonable, then nearly every denial of an application such as this will violate the Act, an obviously absurd result.[124]

There is just no need for the Commission to weigh in here.

F. The Commission Should Not Adopt a "Deemed Granted" Injunctive Relief Remedy for Violations of Section 332(c)(7)

The Commission should not adopt a "deemed granted" injunctive relief remedy for violations of Section 332(c)(7). In its *2009 Declaratory Ruling*, the Commission stated that "case law does not

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[122] PCIA comments, WT Docket 11-59, at 35 (July 19, 2011).

[123] *Jefferson County*, 968 F.Supp. at 1468 n.16 (citation).

[124] *AT&T Wireless, PCS, Inc. v. City of Virginia Beach*, 155 F.3d 423, 437 (4th Cir. 1998) (emphasis added).

establish that an injunction granting the application is always or presumptively appropriate when a 'failure to act' occurs."[125] Case law has not changed in that regard, and no compelling facts have come forward, even after the Commission solicited comments through a Notice of Inquiry in 2011,[126] that even suggests the Commission should change its approach here.

The courts are properly and solely suited to fashion remedies for violations of Section 332(c)(7), as the Commission noted in this Notice of Proposed Rulemaking. While the Commission adopted the "shot clock" through the *2009 Declaratory Ruling*, there is nothing more the Commission can do now, in its own shot clock parlance, to "move the ball forward."

IX. CONCLUSION

To promote certainty and facilitate Congressional intent in Section 6409(a) to streamline the permit process for *de minimus* changes to a narrow class of existing purpose-built structures, the Commission should narrowly define the elements of an eligible facilities request as discussed above. Local communities should also retain their traditional land use authority to define a substantial change and develop procedures to flexibly respond to new technologies that will inevitably follow from Section 6409(a). After all, the most technologically neutral rule the Commission could adopt is no rule at all.

Moreover, the Commission should carry forward the current timeframes under Section 332(c)(7), as interpreted in the *2009 Declaratory Ruling*. The Commission should recognize that the wireless facility permitting process works with the "presumptively reasonable" times it established in 2009, with a far more complete record than the one before it through this proceeding.

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[125] *2009 Declaratory Ruling*, 24 FCC Rcd at 14012 para. 39.

[126] Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting, WC Docket No. 11-59, *Notice of Inquiry*, 26 FCC Rcd 5384 (2011).

EXHIBIT A
COMMENTS OF THE CALIFORNIA LOCAL GOVERNMENTS

Although the Commission should clarify some issues here, it should tread lightly. The Commission should limit its rulemaking to only those areas where it can balance a respect for local zoning authority with an interest in deploying wireless facilities.

Respectfully submitted,

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EXHIBIT B

Joint Reply Comments Filed by the League of California Cities, the California State Association of Counties and SCAN NATOA

In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies (WT Docket No. 13-238)

[appears behind this coversheet]

EXHIBIT B

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies	)	WT Docket No. 13-238
	)	
Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting	)	WC Docket No. 11-59
	)	
Amendment of Parts 1 and 17 of the Commission's Rules Regarding Public Notice Procedures for Processing Antenna Structure Registration Applications for Certain Temporary Towers	)	RM-11688 (terminated)
	)	
2012 Biennial Review of Telecommunications Regulations	)	WT Docket No. 13-32
	)	

JOINT REPLY COMMENTS FILED BY THE LEAGUE OF CALIFORNIA CITIES, THE CALIFORNIA STATE ASSOCIATION OF COUNTIES, AND SCAN NATOA

Filed: March 5, 2014

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California Local Governments acknowledge and thank Javan Rad, Esq. of the City of Pasadena, California and Robert C. May III, Esq. of Telecom Law Firm, P.C. for their work as lead drafters of these reply comments.

EXHIBIT B

SUMMARY

The League of California Cities ("League"), the California State Association of Counties ("CSAC"), and the States of California and Nevada Chapter of National Association of Telecommunications Officers and Advisors ("SCAN NATOA") (collectively, "California Local Governments") offer these comments in response to the comments filed on February 5, 2014 in the Federal Communications Commission's (the "Commission") Notice of Proposed Rulemaking ("NPRM") adopted and released on September 26, 2013.[1] California Local Governments appreciate the opportunity to participate in this important matter.

California Local Governments support the thorough and thoughtful comments filed by many municipal commenters, and specifically the comments from the City of Alexandria, Virginia; the City of Eugene, Oregon; the City of Mesa, Arizona; the Colorado Communications and Utility Alliance *et al.*; Fairfax County, Virginia; the National Association of Telecommunications Officers and Advisors ("NATOA") *et al.*; City of San Antonio, Texas; and the Town of Hillsborough, California.[2] In contrast, California Local Governments generally oppose the comments from AT&T; Crown Castle; CTIA; PCIA; Sprint Corporation; Towerstream Corporation; and Verizon.[3]

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[1] *See* In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, *Notice of Proposed Rulemaking*, 2013 WL 5405395 (F.C.C.), ¶ 102 (rel. Sep. 26, 2013) [hereinafter "NPRM"].

[2] *See* JOINT COMMENTS OF THE CITY OF ALEXANDRIA, VA. *ET AL.*, *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014); COMMENTS OF THE CITY OF EUGENE, OR., *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014); REPLY COMMENTS OF THE CITY OF MESA ARIZ., *Reply Comment*, WT Docket No. 13-238 (filed Feb. 26, 2014); COMMENTS OF THE COLO. COMMS. AND UTIL. ALLIANCE *ET AL.*, *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014); COMMENTS OF FAIRFAX CNTY., VA., *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014) [hereinafter "FAIRFAX CNTY. COMMENTS"]; JOINT COMMENTS OF THE NAT'L ASS'N OF TELECOMS. OFFICERS & ADVISORS *ET AL.*, *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014) [hereinafter "NATOA COMMENTS"]; COMMENTS OF THE CITY OF SAN ANTONIO, TEX., *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014) [hereinafter "SAN ANTONIO COMMENTS"]; COMMENTS OF THE TOWN OF HILLSBOROUGH, CAL., *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014).

[3] *See* COMMENTS OF AT&T, *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014) [hereinafter "AT&T COMMENTS"]; COMMENTS OF CROWN CASTLE, *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014) [hereinafter "CROWN CASTLE COMMENTS"]; COMMENTS OF CTIA—THE WIRELESS ASS'N, *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014); COMMENTS OF PCIA—THE WIRELESS INFRASTRUCTURE ASS'N & THE HETNET FORUM,

EXHIBIT B

These reply comments address only selected issues—namely, the proposed (1) new rules to interpret Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012 (codified as 47 U.S.C. § 1455(a) (2013)); (2) PCIA definition of a distributed antenna system ("DAS") or small cell; and (3) revised rules to interpret Section 332(c)(7)(B) of the Telecommunications Act of 1996 ("Telecom Act").

* * *

No Demonstrated Need for New or Revised Rules. The Commission should not now revise current rules or adopt new ones because no factual record exists to show a national problem for the Commission to redress. The initial comments generally show that the current rules work well, and that State and local governments implemented Section 6409(a) without much controversy.[4] Appendix A, attached to these comments, provides more detailed responses to the anecdotal (and often misleading) assertions provided in some wireless industry comments.

Any Potential Rules Must Be Narrow. Should the Commission adopt new rules, it should recognize and reject the unworkable scheme proposed in the NPRM. Under the proposed rules, Section 6409(a) would require State and local governments to approve virtually all new wireless facilities within 45 days regardless of whether a bona fide inquiries exists about its status as an "eligible facilities request" or whether it will "substantially change" the host structure.[5] Moreover, the proposed rules would improperly substitute the Commission for the courts as the proper venue to resolve such inquiries.

Comment, WT Docket No. 13-238 (filed Feb. 3, 2014) [hereinafter "PCIA COMMENTS"]; COMMENTS OF SPRINT CORP., *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014) [hereinafter "SPRINT COMMENTS"]; COMMENTS OF TOWERSTREAM CORP., *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014) [hereinafter "TOWERSTREAM COMMENTS"]; COMMENTS OF VERIZON AND VERIZON WIRELESS, *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014) [hereinafter "VERIZON COMMENTS"].

[4] *See infra*, notes 12--14, and accompanying text.

[5] *See infra*, Part I.C.

In the event that the Commission feels compelled to act now, it should adopt only the very most narrowly tailored possible. In particular, California Local Governments emphasize that:

- A "***wireless tower***" means a structure solely or primarily built to support wireless transmission equipment. This standard comports with the limited Congressional intent evidenced in the statutory scheme that includes Section 6409(a), current Commission rules, common usage among both wireless providers and local governments, and common sense.[6]
- Whether a proposal to install new wireless facilities constitutes a "***collocation***" must depend on whether a legally established wireless use already exists on the structure at the time the applicant submits the request. This standard provides a verifiable bright-line test that generally follows the logic in the *2009 Declaratory Ruling*.[7]
- The broad phrase "***substantially change the physical dimensions***" includes all physical changes—increases, decreases, and other aesthetic transformations. Any eligible facilities request that does not mimic and extend the camouflage on the existing wireless tower or base station causes a *per se* substantial change.[8]
- The phrases "***or any other provision of law***" and "***may not deny, and shall approve***" does not exempt wireless applicants from generally applicable laws. Nothing in Section 6409(a) supports such a proposed rule.[9]

PCIA-Proposed DAS & Small Cell Standards. The Commission should reject the illusory standard that PCIA proposes for a distributed antenna system ("DAS") or small cell

[6] *See infra*, notes 25–31, and accompanying text.
[7] *See infra*, notes 32–34, and accompanying text.
[8] *See infra*, notes 35–43, and accompanying text.
[9] *See infra*, notes 47–59, and accompanying text.

because it would allow wireless providers to fill public spaces with an unlimited number of wireless equipment enclosures.[10]

Deemed-Granted Remedy. The Commission should not impose an extraordinary and constitutionally questionable deemed-granted remedy on local governments that require additional time to review a permit request or find that a permit should not be issued. No factual record exists to justify a rule with such magnitude, and that would summarily reverse the entire wireless permit process.[11]

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[10] *See infra*, Part II.
[11] *See infra*, Part III.E.

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I. THE COMMISSION SHOULD DECLINE TO ADOPT THE WIRELESS INDUSTRY'S UNNECESSARY, UNWORKABLE, & IRRATIONALLY DANGEROUS RULES

In response to the NPRM, comments from the wireless industry (1) offer little to no actual evidence of any national problem for the Commission to redress; (2) propose a series of rules that dismantles local land use authority piece by piece; and (3) urge the Commission to disregard generally applicable laws designed to protect people and property from overbuilt or poorly constructed facilities.

A. No Factual Record Demonstrates a Present Need for New Rules

The Commission should not adopt new rules without a clear and fully developed factual record that shows a pervasive problem the Commission can redress.[12] This basic principal rings even more true when the Commission proposes rules that preempt local power over areas of traditionally local control, such as land use. With no factual record that demonstrates a national problem at this time, the Commission should not adopt any new rules at this time.

Although the industry comments provide a few anecdotal examples with limited (if any) factual context, the Commission could not infer a nationwide problem from a few isolated disputes. Indeed, the Commission should ignore anecdotal examples when the comments do not name the alleged bad actor, as when Verizon that asserted various unnamed communities in Georgia impose onerous permit requirements, because basic due process requires adequate notice and an opportunity to respond.[13]

In an attempt to drum up a record where none exists, several industry commenters offer the same factual record from the *2009 Declaratory Ruling* as evidence that the Commission

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[12] *See* COMMENTS OF THE DISTRICT OF COLUMBIA at 5, *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014); FAIRFAX CNTY. COMMENTS, *supra* note 2, at 4; NATOA COMMENTS, *supra* note 2, at 7.

[13] *See* VERIZON COMMENTS, *supra* note 3, at 27.

should adopt more restrictive rules now.[14] The Commission should not consider such old evidence from the *2009 Declaratory Ruling*, which supported the current presumptively reasonable time, to now justify a materially shorter time under the same facts. Instead, the Commission should consider only the facts in the current record (or lack thereof) in the present NPRM.

B. In the Event the Commission Decides to Adopt New Rules, It Should Adopt Narrow Rules that Comport with Congressional Intent, Common Sense, and Federalism Principles

In the event that the Commission decides to define certain terms in Section 6409(a) or revisit the *2009 Declaratory Ruling*, notwithstanding the absence of a reliable factual record that demonstrates any need, then the Commission should narrowly define the terms to comport with Congressional intent, common use, and common sense. California Local Governments, like many other municipal commenters, expansively discussed these issues in its initial comments and reiterate them now.[15]

The Commission should specifically decline to adopt preemptive rules that divest authority from local governments and channel local fact-intensive inquiries away from currently available venues, such as local administrative bodies and the courts best suited to address these questions. Such proposed rules flaunt bedrock federalism principals and would transform the Commission and its staff into the very "national zoning board" that it seeks to avoid.[16]

C. The Proposed Rules Eviscerate Reasonable Local Control and Foster a Race to the Bottom Rather than Rational Wireless Policies

The industry commenters endorse a series of individual rules that, when strung together, would eviscerate local control over a vast number of wireless facilities. For example, the

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[14] *See, e.g.*, AT&T COMMENTS, *supra* note 3, at 29; CTIA COMMENTS, *supra* note 3, at 18 n.64.
[15] *See* JOINT COMMENTS FILED BY THE LEAGUE OF CAL. CITIES *ET AL.* at 1–11, *Comment*, WT Docket No. 13-238 (filed Feb. 238) [hereinafter "CAL. LOCAL GOV'TS COMMENTS"]; NATOA COMMENTS, *supra* note 2, at 6–7.
[16] *See* NPRM, *supra* note 1, at ¶ 99.

proposed industry rules would classify *any* proposal to place wireless transmission facilities on *any* structure as a collocation subject to a 45-day shot clock and deemed-granted remedy. Under this industry scheme, virtually all wireless facilities on existing structures (new builds as well as collocations) would escape any discretionary review so long as the service provider did not substantially increase the height of that support structure.[17]

The proposed rules conflict with the basic policies inherent in both the Telecom Act and current Commission rules.[18] The scheme in these proposed rules (1) ignores the necessary balance between the public interest in wireless infrastructure and the public interest in safe and rational land uses, (2) encourages bad actors in the wireless industry to game the system, and (3) eliminates opportunities for cooperative solutions between industry and local government.

Wireless towers and base stations do not exist in some invisible abstract; these facilities operate in the shared space where we all live and work. Just as wireless facilities share space with other uses, these facilities must follow the same rules. The Commission may find some narrow "rules of the road" necessary to further these sometimes-conflicted public interests, but the Commission should not allow policies intended to accelerate wireless services to devolve into a race to the bottom, in which wireless providers attempt to preempt as many local laws as possible under the guise of Section 6409(a).

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[17] *See, e.g.*, AT&T COMMENTS, *supra* note 3, at 22, 24, 26; CTIA COMMENTS, *supra* note 3, at 12–13, 16–18; PCIA COMMENTS, *supra* note 3, at 31–32, 34–36, 48, 50; SPRINT COMMENTS, *supra* note 3, at 8–11; VERIZON COMMENTS, *supra* note 3, at 28, 31–32.

[18] *See* 47 U.S.C. § 332(c)(7) (2011) (preserving general local authority while preempting limited specific local prerogatives); In the Matter of Petition for Declaratory Ruling to Clarify Provisions of Section 332(C)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances That Classify All Wireless Siting Proposals as Requiring a Variance, *Declaratory Ruling*, 24 FCC Rcd. 13994, 140013 ¶ 49 (rel. Nov. 18, 2009) (finding a strong public interest in cooperation and consensual resolutions between industry and communities) [hereinafter "*2009 Declaratory Ruling*"].

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II. THE COMMISSION SHOULD REJECT PCIA'S ILLUSORY STANDARD FOR DAS & SMALL CELLS BECAUSE THE EXPANSIVE & UNLIMITED NUMBER OF EQUIPMENT BOXES WILL LIKELY CAUSE A SIGNIFICANT ENVIRONMENTAL IMPACT

PCIA and several other industry commenters urge the Commission to adopt an inappropriately expansive standard to define a distributed antenna system ("DAS") node or small cell.[19] Specifically, PCIA proposes to define a DAS or small cell via reference to its volumetric size as follows:

> **(1) Equipment Volume.** An equipment enclosure shall be no larger than seventeen (17) cubic feet in volume.
>
> **(2) Antenna Volume.** Each antenna associated with the installation shall be in an antenna enclosure of no more than three (3) cubic feet in volume. Each antenna that has exposed elements shall fit within an imaginary enclosure of no more than three (3) cubic feet.
>
> **(3) Infrastructure Volume.** Associated electric meter, concealment, telecom demarcation box, ground-based enclosures, battery back-up power systems, grounding equipment, power transfer switch, and cut-off switch may be located outside the primary equipment enclosure(s), and are not included in the calculation of Equipment Volume.
>
> Volume is a measure of the exterior displacement, not the interior volume of the enclosures. Any equipment that is concealed from public view in or behind an otherwise approved structure or concealment, is not included in the volume calculations.[20]

These definitions do not clearly describe the PCIA proposal. To help the Commission evaluate the proposed standard, California Local Governments provides Figure 1, which depicts a few various possible examples that would qualify as a DAS node or small cell.

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[19] *See* PCIA COMMENTS, *supra* note 3, at 7–8; *see also* AT&T COMMENTS, *supra* note 3, at 14; SPRINT COMMENTS, *supra* note 3, at 6; CROWN CASTLE COMMENTS, *supra* note 3, at 5.
[20] *See* PCIA COMMENTS, *supra* note 3, at 7.

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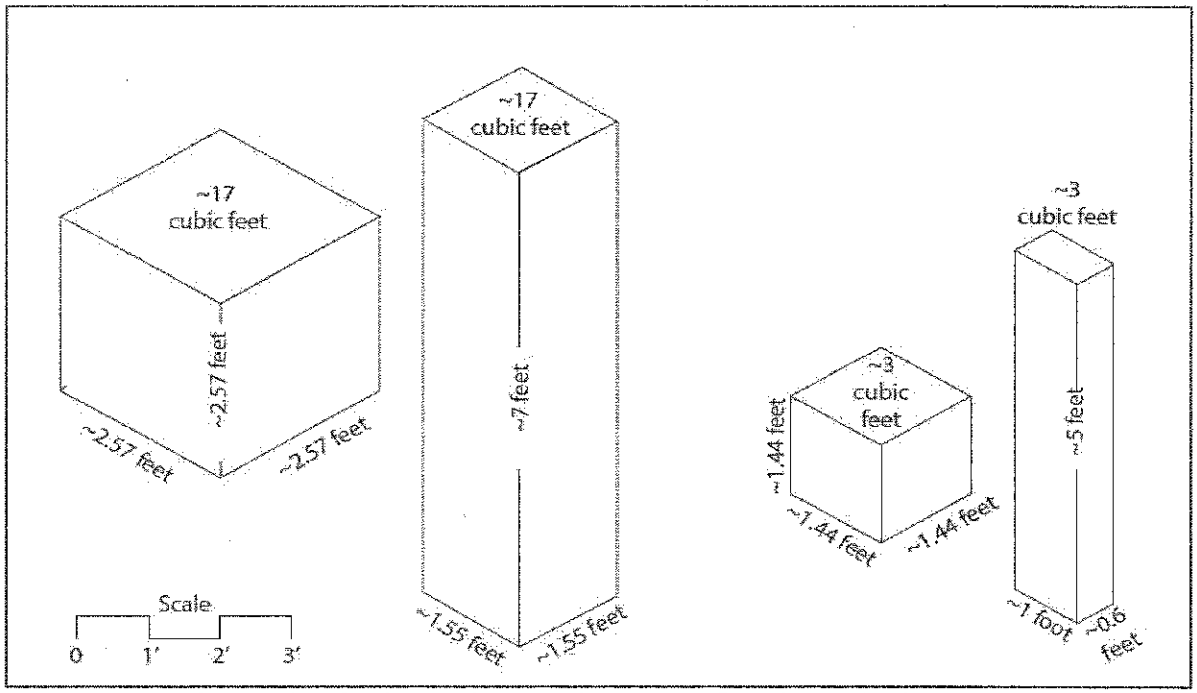

FIGURE 1: Isometric examples of various equipment and antenna configurations under the PCIA proposed standard for DAS and small cell facilities. (Source: Telecom Law Firm, P.C.)

The Commission should not adopt the proposed PCIA standard for DAS nodes and small cells because it comes riddled with carve-outs for large and intrusive equipment that completely eviscerate any actual limit on the permitted size. The Commission may categorically exclude certain projects only when it finds that the project will not likely cause a substantial impact on the environment. However, the Commission cannot determine the likelihood of a substantial environmental impact when it cannot determine the scope of the project itself.

PCIA not only proposes a rather large pole-mounted equipment volume at seventeen cubic feet, but also proposes to *exclude* "[a]ssociated electric meter, concealment, telecom demarcation box, ground-based enclosures, battery back-up power systems, grounding equipment, power transfer switch, and cut-off switch may be located outside the primary equipment enclosure(s)."[21] Under this proposal, a DAS or small cell operator could install an

[21] *See* PCIA COMMENTS, *supra* note 3, at 7.

unlimited number of ground-mounted equipment cabinets *in addition to* a pole-mounted equipment box larger than the average person.

The proposed standard similarly does not limit the number of three-cubic-foot antennas at each DAS node or small cell. Although PCIA deleted language from the second prong that expressly permitted an unlimited number of antennas, this change does not affirmatively limit the number of antenna enclosures associated with each DAS node or small cell.[22] The proposed standard still permits an unlimited number of antennas.

Moreover, the proposed standard exempts all equipment from the volumetric limits when concealed from public view, and excludes "concealment" from the basic infrastructure volume equation.[23] In other words, PCIA asks the Commission to exempt all equipment that the public cannot see and all the structures installed to prevent the public from seeing the equipment. This circular and overreaching carve-out should eliminate any doubt that the proposed standard would allow a limitless number of equipment elements at the DAS node or small cell site.

The Commission should reject this proposed standard as illusory because it does not actually limit the scope of a DAS node or small cell, and thus the Commission cannot actually determine whether such projects will likely cause a significant environmental impact.

III. SECTION 6409(a) ISSUES

As many commenters discussed, Congress could not and did not intend Section 6409(a) to preempt all local land use control or to guarantee approval for every eligible facilities

[22] *Compare* NPRM, *supra* note 1, at ¶ 49 n.99 (including the words "[t]here is no limit to the number of antennas that can be installed by-right as part of a DAS or Small Cell installation"), *with* PCIA COMMENTS, *supra* note 3, at 7 (omitting the same).

[23] *See* PCIA COMMENTS, *supra* note 3, at 7.

request.[24] Although the Commission need not interpret Section 6409(a) at this time, any rules it might adopt should recognize the limits in the statute and not just its mandate to approve certain alleged *de minimis* wireless infrastructure changes.

A. The Proposed Definition of an "Existing Wireless Tower or Base Station" Would Artificially Transform All New Wireless Facilities into Collocations

The Commission should reject the proposal from industry commenters to define "existing wireless tower or base station" to include structures that do not presently support any wireless equipment.[25] As explained in Part I.C above, this rule would artificially transform all new wireless facilities into collocations that a government "may not deny, and shall approve" because the applicant could technically request a permit to "collocate" wireless transmission equipment on an "existing wireless tower or base station." Section 6409(a) would then require local governments to approve all *new sites* that do not result in a substantial change.

In support of the proposed rule, CTIA attempts to argue that a *post hoc* written statement from Representative Fred Upton somehow shows Congress intended to streamline collocation of wireless transmission equipment in general rather than only those structures that currently support wireless facilities.[26] The Commission should reject this line of argument because (1) the comments appeared after Congress enacted the statute and (2) the statutory scheme in the Spectrum Act proves otherwise.[27]

First, one congressperson's after-the-fact statement, not offered for debate, does not shed any light on Congressional intent. To evidence Congressional intent, comments in the legislative

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[24] *See, e.g.*, CAL. LOCAL GOV'TS COMMENTS, *supra* note 15, at 18; INTERGOVERNMENTAL ADVISORY COMM., ADVISORY RECOMMENDATION NO. 2013-13, RESPONSE TO NOTICE OF PROPOSED RULEMAKING ADOPTED AND RELEASED SEPTEMBER 26, 2013 at 4 (2013).

[25] *See, e.g.*, AT&T COMMENTS, *supra* note 3, at 22; CTIA COMMENTS, *supra* note 3, at 12; PCIA COMMENTS, *supra* note 3, at 32; SPRINT COMMENTS, *supra* note 3, at 9; VERIZON COMMENTS, *supra* note 3, at 28.

[26] *See* CTIA COMMENTS, *supra* note 3, at 11--12 (citing 158 CONG. REC. at E239 [(Feb. 17, 2012)] (Statement of Rep. Upton)) California Local Governments inserted the date that CTIA omitted.

[27] *See* 158 CONG. REC. E237, E239 (Feb. 17, 2012) (Statement of Rep. Upton).

history must at least appear before Congress votes.[28] The comment CTIA cites appear in the "Extension of Remarks" and thus Congress never actually considered them before it voted on the Middle Class Tax Relief and Job Creation Act of 2012. Although these remarks may represent the intent of one member Congress, the Commission should not consider them persuasive as to the intent of Congress as a whole.

Second, Congress intended a "wireless tower" to narrowly refer to a structure specifically built to support wireless antennas because it chose a more specific statutory term in Section 6409(a) than it adopted in Section 6206(c)(3) of the same act.[29] Section 6206(c)(3) directs FirstNet to leverage "existing . . . commercial or other communications infrastructure . . . and . . . Federal, State, tribal, or local infrastructure" for public safety networks whereas Section 6409(a) authorizes generally commercial carriers to collocate, remove, or replace wireless transmission equipment on "existing wireless tower or base station."[30] The difference between these statutes follows sound public policy because Congress would naturally intend to provide greater access to a governmental first-responder network like FirstNet than it would to private commercial entities like AT&T and Verizon.

Congress specifically chose the term "existing wireless towers" and no evidence on the face of the statute or in the utterly silent legislative history indicates that it intended that phrase to mean "structures similar to wireless . . . towers." Moreover, the words in the proposed rule do not actually provide any limit to the kind of structures covered under Section 6409(a) because many structures could hold wireless facilities and no principled means exists to distinguish

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[28] *See Solid Waste Agency of Northern Cook Cnty. v. U.S. Army Corps of Engineers*, 531 U.S. 159, 170 (2001) (quoting *Hagan v. Utah*, 510 U.S. 399, 420 (1994), for the proposition that "subsequent history is less illuminating than the contemporaneous evidence").

[29] *See* Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6206(c)(3), 126 Stat. 156 (codified as 47 U.S.C. § 1426(c)(3) (2013)); *see also* CAL. LOCAL GOV'TS COMMENTS, *supra* note 15, at 4–5.

[30] *See* 47 U.S.C. § 1426(c)(3) (2013).

structures that "typically hold wireless facilities" from other structures. The Commission should therefore reject Verizon's proposal to define "existing wireless tower or base station" as "structures similar to wireless antenna towers that typically hold wireless facilities" because it conflicts with the plain words and manifest intent in Section 6409(a) and Section 6206(c)(3).[31]

At bottom, the words "existing wireless tower or base station" effectively limits the places where Section 6409(a) applies, so any rule that expanded those places would run counter to manifest Congressional intent. Congress purposely chose the phrase "existing wireless tower or base station" even though it would not include as many structures as the industry commenters would like, and the Commission should faithfully implement that choice.

B. Whether a Permit Request Constitutes a "Collocation" Should Depend on Whether a Legally Established Wireless Use Already Exists on the Structure

Some industry commenters erroneously urge the Commission to follow the *2009 Declaratory Ruling* and define a "collocation" as a request that does not result in substantial increase in size of a tower.[32] This proposal presents the hopelessly circular scenario in which (1) local governments must approve every collocation request that does not substantially change the physical dimensions of the existing wireless tower or base station but (2) a collocation necessarily means a request that does not substantially change the physical dimensions of the existing wireless tower or base station. The Commission suggested that definition years before Congress enacted Section 6409(a); it could not know that it would create this conundrum, and therefore should not define a "collocation" in under Section 6409(a) the same way it defines that term in the *2009 Declaratory Ruling*.

[31] *See* VERIZON COMMENTS, *supra* note 3, at 28.
[32] *See, e.g.*, AT&T COMMENTS, *supra* note 3, at 28.

Instead, the key to whether a proposal to install wireless transmission equipment constitutes a "collocation" depends on whether a legally established wireless use already exists on the structure at the time the applicant submits the request.[33] This criterion provides a verifiable bright-line rule to distinguish collocations from new sites—validly permitted wireless facilities either exist on the structure or they do not. This approach also generally follows the logic in the *2009 Declaratory Ruling*, which found that collocations do not implicate the same local effects as new builds.[34] The Commission should not adopt the collocation standard from the *2009 Declaratory Ruling* because the key to whether a permit request constitutes a collocation depends on the existence of a legally established wireless use on the structure.

C. The Commission Should Not Define Substantial Change and Should Reject the Inappropriately Rigid Four-Part Collocation Agreement Test

California Local Governments emphasizes that the Commission should not attempt to define what constitutes a substantial change under Section 6409(a).[35] Congress intended the flexible "substantially change" standard to allow State and local governments the opportunity to accelerate infrastructure deployment consistent with their local values. The Commission should not take away that flexibility.

In the event that the Commission decides to define a substantial change, it should not adopt the inappropriately rigid four-part test from the Collocation Agreement ("Collocation Agreement Test").[36] Any final rule should (1) recognize that the phrase "substantially change" applies to all physical aspects—not just increases in size—and (2) allow communities to strike

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[33] *See, e.g.*, 53 PA. STAT. ANN. § 11702.2 (West 2012) (defining "collocation" as "[t]he placement or installation of new wireless telecommunications facilities on previously approved and constructed wireless support structures . . ."); *see also* CROWN CASTLE COMMENTS, *supra* note 3, at 10.
[34] *See 2009 Declaratory Ruling*, *supra* note 18, at 14012 ¶ 46.
[35] *See* CAL. LOCAL GOV'TS COMMENTS, *supra* note 15, at 11–12.
[36] *See* NPRM, *supra* note 1, at ¶ 119; *see also* Wireless Telecommunications Bureau Offers Guidance on Interpretation of Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, *Public Notice*, 28 FCC Rcd. 1, at 3 (rel. Jan. 25, 2013).

the right balance between the public interest in wireless infrastructure and the equally important public interests in well-planned and aesthetically consistent communities.

1. *The Phrase "Substantially Change" Encompasses All Articulable Measures*

Despite the broadly generic phrase "substantially change the physical dimensions" in Section 6409(a), the industry comments urge the Commission to adopt the Collocation Agreement Test, which narrowly and rigidly analyzes each eligible facilities request through only empirically measurable increases in only a limited few physical dimensions.[37] The Commission should reject the Collocation Agreement Test because the phrase "substantial change" encompasses all articulable measures. The plain term "change" in Section 6409(a) indicates that State and local governments retain discretionary power over substantial increases, decreases, and other physical differences not necessarily related to size.[38]

The other terms in Section 6409(a) do not limit the general term "change" to the more specific "increase" because the terms "remove" and "replace" in Section 6409(a)(2)(B) explicitly contemplates decreases in size and other changes not necessarily related to size.[39] On rare occasions, a court may invoke the canon *ejusdem generis* to "elucidate [Congress's] words and effectuate its intent," but not when it would "obscure or defeat [its] intent and purpose."[40] Congress included equipment removals and replacements within the term "eligible facilities request," and expressly subjected all eligible facilities requests to the substantial-change analysis. The Commission would therefore "obscure and defeat" Congressional intent if it attempted to limit the general term "change" to merely "increases."

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[37] *Compare* 47 U.S.C. § 1455(a) (2013) (adopting the broadly generic term "change"), *with* CTIA COMMENTS, *supra* note 3, at 14 (interpreting the broadly generic term "change" as the narrowly specific term "increase").
[38] *See* MERRIAM-WEBSTER, http://www.merriam-webster.com/dictionary/change (last visited on Feb. 17, 2014).
[39] *See* 47 U.S.C. § 1455(a)(2)(B).
[40] *See United States v. Alpers*, 338 U.S. 680, 682 (1950).

2. *The Commission Should Reject Proposals to Define Excavation Outside the Wireless Premises as an "Insubstantial" Change*

In the event that the Commission adopts the Collocation Agreement Test, it should reject the PCIA and Sprint proposal to expand the fourth prong to allow applicants to excavate outside the leased or licensed premises.[41] Many eligible facilities requests that involve excavation outside the premises will result in a substantial change, and States that do not consider it a substantial change may freely adopt a different rule.

The industry comments themselves demonstrate that communities that do not consider expanded ground space as a substantial change will reflect that value in its local laws. For example, the Carolinas Wireless Association points out that the North Carolina General Assembly found that an expanded 2,500 square feet did not constitute a substantial change whereas the California Wireless Association points out that the California State Senate considered but rejected a bill that would not cover such expanded premises.[42] Moreover, the Pennsylvania Wireless Association asks the Commission to adopt rules akin to Pennsylvania's Wireless Broadband Collocation Act, which does not require local approval when the proposal would expand the ground space boundaries.[43] The differences among these State laws demonstrate that whether a proposal will cause a substantial change depends in large part on the specific circumstances where the change occurs. The Commission should reject proposals to

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[41] *See* PCIA COMMENTS, *supra* note 3, at 38; SPRINT COMMENTS, *supra* note 3, at 10.
[42] *Compare* COMMENTS OF THE CAL. WIRELESS ASS'N at 3, *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014) (citing 2006 Cal. Legis. Serv. Ch. 676 (S.B. 1627) (West)), *with* COMMENTS OF THE CAROLINAS WIRELESS ASS'N at 3 (citing N.C. GEN. STAT. §§ 160A-400.50(b), 153A349.50(b) (2013)).
[43] *See generally* COMMENTS OF THE PA. WIRELESS ASS'N, *Comment*, WT Docket No. 13-238 (filed Feb. 3, 2014); *see also* N.C. GEN. STAT. §§ 160A-400.53(a1); PA. STAT. ANN. § 11702.4(c)(2).

define excavation outside the wireless premises as an insubstantial change as a misguided lowest common denominator, one size-fits-all approach.

3. *The Commission Should Clarify That Eligible Facilities Requests That Do Not Mimic Existing Camouflage Constitutes a* Per Se *Substantial Change*

The Commission should reject the Collocation Agreement Test because it would permit a wireless upgrade or collocation to undo all the creative and collaborative efforts in the permit review and approval process to camouflage wireless sites. Local governments spend considerable time and resources to find camouflaged solutions, and reasonably expect such sites to remain camouflaged throughout its lifespan. The Commission should not interpret Section 6409(a) to frustrate those efforts or reasonable expectations.

For example, AT&T urges the Commission to find that a request to completely replace a support structure does not cause a substantial change.[44] Section 6409(a) could potentially require a local government to approve a proposal to replace a camouflaged site with an uncamouflaged monopole on the grounds that the replacement pole does not increase the height more than ten percent (10%) or the width more than twenty feet. Figure 2 and Figure 3, below, illustrate this example and its logical outcome under AT&T's proposed view of Section 6409(a).

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[44] *See* AT&T COMMENTS, *supra* note 3, at 24.

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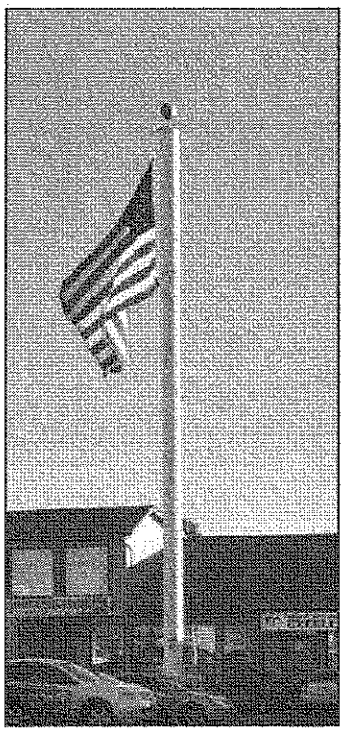

FIGURE 2: Camouflaged site in Denver, Colorado. (Source: Telecom Law Firm, P.C.)

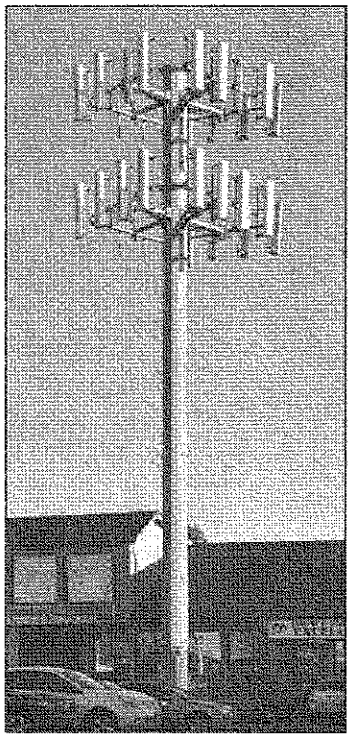

FIGURE 3: A logical mandatory outcome under Section 6409(a) that destroys the approved camouflage. (Source: Telecom Law Firm, P.C.)

PCIA proposes to add a gloss to the Collocation Agreement Test that purports to resolve this issue, but the Commission should see that this proposal comments provide a case-in-point example of how the wireless industry attempts to dismantle local authority piece-by-piece.[45] PCIA concedes that a local government should consider whether a change that undermines elements designed to conceal an existing wireless facility rises to the level of a substantial change, but only to the extent that the change would remove such elements rather than whether the increases frustrate those elements.[46] PCIA also asserts that State and local governments may not deny an eligible facilities request on the ground that it does not comply with a prior condition of approval, as more fully discussed in Part III.D.1 below. Taken together, these proposed rules

[45] *See* PCIA COMMENTS, *supra* note 3, at 39.
[46] *See id.*

hardly preserve any aesthetics at all because the applicant does not need to replicate the camouflage for the new equipment so long as it does not diminish the current camouflage. The images in Figure 4 and Figure 5 depict this concept and logical outcome

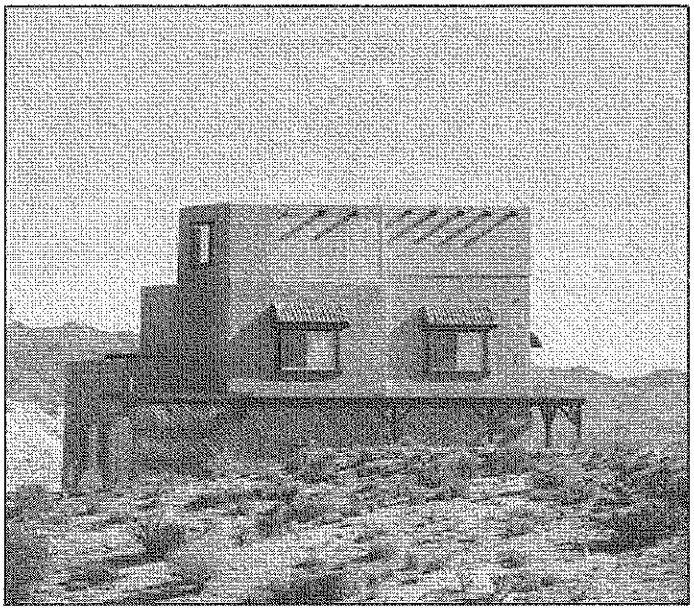

FIGURE 4: Actual photograph of an unmanned camouflaged wireless site in Yucca Valley, California. (Source: Telecom Law Firm, P.C.)

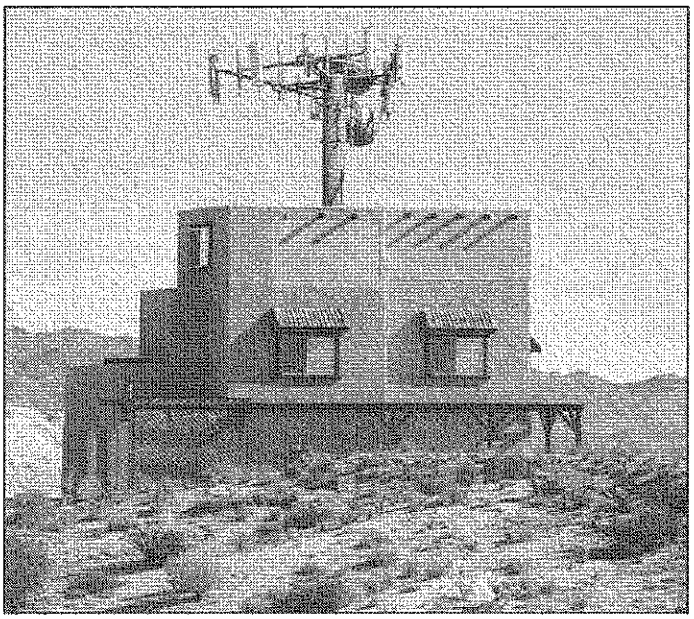

FIGURE 5: Photo simulation that shows a permitted modification under the PCIA formulation. The original site completely concealed all the equipment within the faux-house, whereas the hypothetical collocation does not "remove" the camouflage. (Source: Telecom Law Firm, P.C.)

PCIA's proposed rule would require a local government to approve the collocated tower in Figure 5 because it maintains—but does not mimic—the existing camouflage on the collocated element(s). The Commission can see that this proposed formulation of the rule could cause a substantial change and lead to ridiculous results. Accordingly, the Commission should find that an eligible facilities request must at least effectively mimic the existing camouflage or else constitutes a substantial change *per se* to prevent haphazard, mismatched, and aesthetically disagreeable facilities like the one depicted above.

D. The Commission Should Affirm that Wireless Facilities Must Comply with All Generally Applicable Laws and Conditions of Approval Because Section 6409(a) Does Not Authorize Wireless Providers to Choose Laws With Which It Wants to Comply

Industry comments that claim Section 6409(a) requires local approval regardless of whether the eligible facilities request would violate any generally applicable law wildly overstate its preemptive effect.[47] Section 6409(a) does not provide wireless carriers the unprecedented benefit to pick-and-choose which laws it would like to comply with. The Commission should affirm that (1) Section 6409(a) does not exempt applicants from generally applicable laws and (2) State and local governments retain their power to conditionally approve eligible facilities requests to ensure the projects comply with such laws.

1. *The Commission Should Reject the Unreasonably Dangerous Proposal to Exempt Wireless Facilities from Generally Applicable Zoning and Structural Laws*

Section 6409(a) does not mandate local approval when an otherwise eligible facilities request would "substantially change the physical dimensions of the existing wireless tower or

[47] *See, e.g.*, CTIA COMMENTS, *supra* note 3, at 15 (arguing that a State or local government may not deny an eligible facilities request merely because it allegedly violates a local law); TOWERSTREAM COMMENTS, *supra* note 3, at 23 (asserting that State and local governments must approve *every* eligible facilities request).

base station."[48] Although some industry comments recognize that Section 6409(a) does not exempt wireless facilities from generally applicable zoning and structural laws, other industry commenters argue that the Commission should preempt some—or even all—such laws.[49] The Commission should reject this proposed rule. Any change in physical dimensions that would cause the structure to violate a generally applicable law must constitute a "substantial" change because these laws (1) protect lives and property, and (2) do not effectively prohibit or unreasonably discriminate against personal wireless services. Even industry-friendly State laws do not exempt eligible facilities requests from generally applicable zoning and structural laws. Any other result would compromise public safety only to financially benefit the wireless industry.

First and foremost, Congress did not intend Section 6409(a) to exempt wireless facilities from local oversight needed to prevent serious harm to people and property. As California Local Governments noted in its initial comments, overbuilt wireless facilities like the ones that caused the 2007 Malibu Canyon Fire seriously threaten public health and safety.[50] Recent tower fires and collapses underscore the need for local oversight.[51] Although PCIA asserts that such

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[48] *See* 47 U.S.C. § 1455(a).

[49] *See, e.g.*, CTIA COMMENTS, *supra* note 3, at 15; PCIA COMMENTS, *supra* note 3, at 41 (arguing that Section 6409(a) preempts discretionary zoning laws, but not ministerial structural codes); SPRINT COMMENTS at 11 (arguing that only objective, ministerial, and nondiscretionary structural codes should apply); TOWERSTREAM COMMENTS, *supra* note 3, at 23.

[50] *See* CAL. LOCAL GOV'TS COMMENTS, *supra* note 15, at 14 (citing Melissa Caskey, *CPUC Approves $51.5-Million Malibu Canyon Fire Settlement*, MALIBU TIMES (Sep. 23, 2013), *available at* http://www.malibutimes.com/news/article_3d62067a-2175-11e3-86b6-001a4bcf887a.html).

[51] *See, e.g.*, Brad Doherty, *Spark Ignites Cell Tower Fire*, BROWNSVILLE HERALD (Jan. 6, 2014), http://www.brownsvilleherald.com/news/local/article_dfc15d14-7754-11e3-b856-0019bb30f31a.html; Kathi Belich, *Cellphone Tower Catches Fire in Sanford*, WFTV (Aug. 21, 2013), http://www.wftv.com/news/news/local/cell-phone-tower-catches-fire-seminole-co/nZX69/; Karen Araiza, *Welding Sparked Cell Phone Tower Fire: Officials Figured Out What Caused a Fire that Left a Cell Phone Tower Leaning, Ready to Collapse*, NBC PHILADELPHIA (July 8, 2013), http://www.nbcphiladelphia.com/news/local/Cell-Phone-Tower-on-Fire-in-Bucks-County-212489511.html.

"[c]atastrophic failures" rarely occur, they do occur and the Commission should not preempt laws designed to preserve public safety and prevent such structural failures.[52]

Contrary to some industry comments, State and local governments do not generally enact or revise zoning and structural laws—such as fall zones, setbacks, and limits on expansions to legal nonconforming uses—to thwart wireless infrastructure deployment.[53] From time to time, State and local governments must revise zoning ordinances to reflect natural community changes such as density and new development. In the rare case that a local government improperly exercises its authority, Congress granted the Commission the power to preempt such action "to the extent necessary to correct such violation or inconsistency."[54] The Commission should reject all proposals to preempt fall zones, setbacks, and limits on expansions to legal nonconforming uses because it would preempt far beyond "the extent necessary" as Congress required.[55]

Furthermore, the State laws touted in the industry comments do not exempt eligible facilities requests from generally applicable laws. For example, North Carolina explicitly permits the local government to review whether the proposed changes violate "[a]pplicable public safety, land use, or zoning issues addressed in its adopted regulations, including aesthetics, landscaping, land-use based location priorities, structural design, setbacks, and fall zones."[56] Moreover, the Pennsylvania Wireless Broadband Collocation Act explicitly requires all eligible facilities requests to comply with all prior conditions of approval.[57] For these reasons, the Commission should reject the unreasonably dangerous proposal to exempt wireless facilities from generally applicable zoning and structural laws.

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[52] *See* PCIA COMMENTS, *supra* note 3, at 45.
[53] *See, e.g.*, CTIA COMMENTS, *supra* note 3, at 15; PCIA COMMENTS, *supra* note 3, at 45.
[54] *See* 47 U.S.C. § 253(d) (2011).
[55] *See id.*
[56] *See* N.C. GEN. STAT. §§ 160A-400.52(c)(1).
[57] *See* PA. STAT. ANN. § 11702.4(c)(4).

2. *The Commission Should Affirm the Local Government Power to Conditionally Approve Eligible Facilities Requests*

Some industry comments incorrectly equate a conditional approval with an outright denial, and urge the Commission to effectively preempt the power to conditionally approve permit applications.[58] State and local government must retain their traditional police power to conditionally approve permits as a mechanism to enforce generally applicable laws. Like any other exercise of local power, the Telecom Act already provides an "expedited" remedy for prohibitory or unreasonably discriminatory permit conditions.[59]

Moreover, conditional approvals may even salvage some wireless facilities proposals that, for example, a local government might otherwise deny on the ground that it does not comply with the zoning code. For these reasons, the Commission should affirm the local government power to conditionally approve eligible facilities requests.

E. The Commission Should Not Craft any New Section 6409(a) Remedies

Like many other commenters, California Local Governments explained how a deemed-granted remedy for an alleged failure for a government to act within the presumptively reasonable time violates the Tenth Amendment and federalism principles.[60] California Local Governments find nothing in the industry comments that shows otherwise. Moreover, California Local Governments reiterate its initial comments that Congress already established the appropriate judicial procedures to resolve Section 6409(a) disputes.[61]

The industry comments overstate Commission authority to adopt a deemed-granted remedy because: (1) the fact that a few State statutes provide a deemed-granted remedy merely

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[58] *See* AT&T COMMENTS, *supra* note 3, at 26; PCIA COMMENTS, *supra* note 3, at 42–43.
[59] *See* 47 U.S.C. § 332(c)(7)(B)(v).
[60] *See* CAL. LOCAL GOV'TS COMMENTS, *supra* note 15, at 25–26; *see also* FAIRFAX CNTY. COMMENTS, *supra* note 2, at 18.
[61] *See* CAL. LOCAL GOV'TS COMMENTS, *supra* note 15, at 24–25.

reflects the unique power of the State over its instrumentalities and does not evidence the Commission's power to do the same; (2) a self-executing deemed-granted remedy would be inappropriate because Section 6409(a) does not guarantee approval for every eligible facilities request; and (3) Congress intended the local courts, not the Commission in distant Washington D.C., to determine whether to order an approval.

1. *Industry Comments Overstate Commission Authority to "Accelerate Broadband Deployment" Through a Deemed-Granted Remedy*

PCIA overstates the Commission authority to adopt a deemed-granted remedy because Congress did not authorize the Commission to bluntly preempt the vast majority of State and local land use laws as a means to accelerate broadband deployment. Section 706 of the Telecom Act authorizes the Commission to accelerate broadband deployment when it finds that deployment does not occur on reasonable and timely basis.[62] Although this authority appears broad, whether an adopted rule may stand depends on whether the agency acted reasonably—a standard that narrows as the impact of the rule broadens.

The Commission should carefully note that judicial deference to a legislative rule often depends on the nature of the issue and the impact of the rule.[63] In *FDA v. Brown & Williamson Tobacco Corp.*, the Supreme Court held that the FDA could not regulate tobacco as drugs even through the statutory term for "drug" appeared broad enough to encompass such products.[64] The Court reasoned that common sense dictates that Congress would not likely "delegate a policy decision of such economic and political magnitude to a political agency."[65] Similarly, in *MCI Telecommunications Corp. v. American Telephone & Telegraph Co.*, the Court held that the

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[62] *See* 47 U.S.C. § 1302 (2013).
[63] *See, e.g., FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 133 (2000); *MCI Telecoms. Corp. v. Am. Tel. & Tel. Co.*, 512 U.S. 218, 225 (1994).
[64] *See Brown & Williamson*, 529 U.S. at 133.
[65] *See id.*

statutory power in Section 303(r) to "modify any requirement" under the Communications Act of 1932 did not allow the FCC to regulate long-distance telephone rates because Congress would not so subtly permit the Commission to regulate the rates of an entire industry.[66] Thus, the scope of reasonableness grows narrower as the social and economic impact of the rule grows broader.

Here, a court will likely interpret the scope of Commission authority as narrowly as possible because the proposed rules would massively and disruptively impact land-use policies nationwide. Congress preserved local discretion over eligible facilities requests that cause a substantial change, and as in *Brown & Williamson* and *MCI Telecoms*, common sense dictates that Congress would not delegate the power to completely eliminate local discretion in a subject matter of "such economic and political magnitude."[67] Moreover, even though the Commission might interpret the preemptive language of Section 6409(a) to include such power, Congress would not so cavalierly permit the Commission to preempt virtually every State and local zoning law across the nation on the threadbare basis of the 149 words in Section 6409(a), and lacking any real legislative record.[68] Thus, the Commission should note that its authority to promulgate rules to "accelerate broadband deployment" very likely does not permit all the rules proposed in the NPRM.

2. *States May Impose Deemed-Granted Remedies that the Federal Government May Not Because a State Bears a Unique Relationship to Its Political Instrumentalities*

Several industry commenters urge the Commission to follow those few State legislatures that adopted deemed-granted remedies similar to the one proposed in the NPRM.[69] However, the

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[66] *See MCI Telecoms.*, 512 U.S. at 225.
[67] *See Brown & Williamson*, 529 U.S. at 133.
[68] *See MCI Telecoms.*, 512 U.S. at 225.
[69] *See, e.g.*, CAL. WIRELESS ASS'N COMMENTS, *supra* note 42, at 3–4; CAROLINAS WIRELESS ASS'N COMMENTS, *supra* note 42, at 2; PA. WIRELESS ASS'N COMMENTS, *supra* note 43, at 1–2.

Commission should not consider these few statutes as evidence that the federal government may (or should) impose such remedies because the States and federal government bear fundamentally different relationships with local governments.

Just because a few individual States decided to enact a law does not automatically mean the federal government may enact the same law and impose it on all other States. State legislatures may exercise plenary authority over local governments because "[m]unicipal corporations are political subdivisions of the state, created as convenient agencies for exercising such of the governmental powers of the state as may be intrusted to them."[70] In contrast, the Tenth Amendment limits the federal power to those specifically enumerated in the Constitution.[71] The Commission should not view deemed-granted remedies under individual State law as evidence of federal power to impose the same.

3. *The Commission Should Not Adopt a Self-Executing Deemed-Granted Remedy Because Section 6409(a) Does Not Guarantee Approval for Every Eligible Facilities Request*

CTIA and other industry commenters rely on a false premise when it asserts that the Commission must adopt a deemed granted remedy because a judicial cause of action does not *guarantee* an approval.[72] Section 6409(a) does not guarantee that a local government will approve *every* eligible facilities request.[73] Even when the applicant submits an eligible facilities request, it still bears the burden to prove that its specific proposal will not create a substantial change.[74]

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[70] *See Hunter v. Pittsburgh*, 207 U.S. 161, 178 (1907).
[71] U.S. CONST. Amend. X.
[72] *See* CTIA COMMENTS, *supra* note 3, at 18.
[73] *See* 47 U.S.C. § 1455(a).
[74] *See id.*

Nevertheless, many industry commenters urge the Commission to adopt a rule that would *automatically* deem granted any eligible facilities request after a mere forty-five days without independent review.[75] Congress already implicitly rejected this oppressive approach because the statute does not guarantee approval for every eligible facilities request through its explicit limit on substantial changes. Moreover, the Commission already implicitly rejected this approach when it proposed to find that an eligible facilities request presupposes the traditional permit application process. Indeed, what purpose would a permit application serve when it becomes "deemed granted" regardless of how the local government responds? The Commission should not impose a deemed-granted remedy.

4. *The Commission Should Not Substitute Itself for the Courts as the Appropriate Venue to Resolve Section 6409(a) Disputes*

The Commission should reject the industry comments that urge the Commission to adjudicate wireless land-use disputes. Congress recognized that local courts, with more expertise in land-use matters, greater resources, and with local access to the facts in the matter, should serve as the neutral factfinder when it specified the remedies in the Telecom Act.[76] Congress did not indicate any intent to revisit its earlier choice, and the Commission should not unilaterally substitute itself for the courts.

IV. THE COMMISSION SHOULD DECLINE TO IMPOSE RULES GUIDING FACT-INTENSIVE INQUIRIES ABOUT MUNICIPAL PROPERTY PREFERENCES

California Local Governments join the comments of the City of San Antonio, Texas, and urge the Commission to decline to adopt rules relating to local ordinances establishing a

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[75] *See, e.g.*, AT&T COMMENTS, *supra* note 3, at 26; CTIA COMMENTS, *supra* note 3, at 18; PCIA COMMENTS, *supra* note 3, at 50; SPRINT COMMENTS, *supra* note 3, at 11; VERIZON COMMENTS, *supra* note 3, at 32–33.
[76] *See* 47 U.S.C. § 332(c)(7)(B)(v).

municipal property preference.[77] Local courts are best suited to resolve such disputes, assuming Section 332 even applies. For example, Section 332 does not apply at all when a government acts as a landowner because cities that exercise "property rights as a landowner . . . fall outside the [Telecom Act's] preemptive scope . . . ."[78]

The Commission should decline CTIA's request to establish a *per se* unreasonably discriminatory finding for "preferential [zoning] treatment for applicants utilizing municipal land or facilities."[79] Such a rule would be contrary to the requirement of *unreasonable* discrimination because it would block a municipality's opportunity to rebut that finding. The courts are best suited to resolve concerns, such as CTIA's, where a municipality delays or denies a permit for a "non-municipal site or facility solely to bestow an economic benefit upon a local jurisdiction . . . ."[80]

First, municipalities should have the opportunity, in court, to present facts demonstrating that, if some discrimination exists, why that discrimination is reasonable. Courts' analysis of Equal Protection claims under the Fourteenth Amendment presumes differential treatment to be valid "if the classification drawn by the statute is rationally related to a legitimate state interest."[81] Even under the Equal Protection Clause, which only requires discrimination (not *unreasonable* discrimination), after a plaintiff has established a prima facie case of discrimination, "the burden of proof shifts to the State to rebut the presumption of

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[77] *See* SAN ANTONIO COMMENTS, *supra* note 2, at 25–28.
[78] *Omnipoint Com., Inc. v. City of Huntington Beach*, 738 F.3d 192, 201 (9th Cir. 2013) (holding city's decision that it could not license city-owned park "without voter approval is not the type of zoning and land use decision covered by § 332(c)(7)"); *Sprint Spectrum, L.P. v. Mills*, 283 F.3d 404, 421 (2d Cir. 2002) (concluding the Telecommunications Act of 1996 "does not preempt nonregulatory decisions of a local government entity or instrumentality acting in its proprietary capacity").
[79] CTIA COMMENTS, *supra* note 3, at 20.
[80] CTIA COMMENTS, *supra* note 3, at 21.
[81] *See City of Cleburne v. Cleburne Living Center*, 473 U.S. 432, 440 (1985).

unconstitutional action . . . ."[82] Under CTIA's proposed rule, there would no presumption of validity, and no burden-shifting—contrary to how the courts have approached discrimination claims under the Equal Protection Clause. Municipalities should be afforded the opportunity to explain the application of their ordinances, for example, why they may require antennas on a police or fire station in a single-family residential area. There may be perfectly legitimate reasons for such a requirement, like encouraging the provision of wireless coverage in a residential area, yet simultaneously preventing the blight of antennas emerging from residential homes.

Second, municipalities should have the opportunity, in a neutral local court, to present facts explaining how they are not unreasonably discriminating against a particular service provider. In order to prevail on an unreasonable discrimination claim, the plain text of Section 332(c)(7)(B)(i)(I) requires a carrier to show the municipality unreasonably discriminated "among providers of functionally equivalent services." No discrimination exists when all carriers have the same opportunities to place facilities. Congress set forth the legal standard in the statute, and provided for judicial remedies. The Commission is not well-suited to set rules over these local, fact-intensive inquiries from its distant location in Washington D.C., and should avoid rulemaking in this area.

V. CONCLUSION

The scant record before the Commission does not show an actual and present need for disruptive federal intervention. Rather, in the limited time since Congress enacted Section 6409(a) and the Commission promulgated the *2009 Declaratory Ruling*, local governments generally tailored their local policies to facilitate the federal objectives. The Commission should

[82] *See Washington v. Davis*, 426 U.S. 229, 241 (1976).

confirm the primary role of local governments to facilitate wireless deployment through rational policies that reflect local circumstances and values, just as Congress intended.

Respectfully submitted,

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EXHIBIT B

APPENDIX A

Several wireless industry commenters provided anecdotal examples that allegedly supports new or revised rules. This Appendix provides factual rebuttals to demonstrate why the Commission should not base any new or revised rules on the limited and misleading facts presented in some wireless industry comments.

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City of Albany, California

Verizon complains that Albany deliberated for 90 days to determine whether a proposal qualified as an "eligible facilities request" under Section 6409(a), but fails to mention that it submitted its request *before* Congress enacted Section 6409(a).[83] The "eligible facilities request" concept therefore did not exist at the outset of this permit request.

Verizon omitted the material facts that show how Albany acted reasonably under the circumstances and within the presumptively reasonable timeframes. In 2011, Verizon proposed to add new equipment to a 65-foot-tall wooden monopole (in a zone with a maximum 45-foot height limit) that also supported MetroPCS equipment. Albany initially sought to bring this legal nonconforming use into compliance, but encountered substantial delays from Verizon when it requested Verizon produced a structural analysis to show the wooden pole could support all the current and planned equipment loads. In 2012, after Congress enacted Section 6409(a), Albany reassessed the facts, found that Verizon submitted an eligible facilities request, and approved the permit.

[83] *See* VERIZON COMMENTS, *supra* note 3, at 31.

City of Campbell, California

Both CTIA and Verizon vaguely allege that a request to upgrade Verizon antennas at an undisclosed site had been pending at the City of Campbell, California, for more than 130 days.[84] However, the Commission should ignore this anecdote because neither commenters actually identify the request nor can Campbell find any record of any permit request that matches that description. The Commission should not afford any weight to such suspiciously incomplete claims masqueraded as settled facts.

Moreover, PCIA misstates the facts when it alleges that Campbell required a wireless provider to seek a conditional use permit for a permit to upgrade "like-for-like antennas" at an existing site.[85] Campbell required a conditional use permit because (1) the Sprint monopole, originally built in an unincorporated area, violated zone height limit after Campbell annexed the land; and (2) Sprint proposed to add new equipment and larger antennas.[86]

First, Campbell did not retroactively apply its zone height ordinance to purposely deny Sprint's request to substantially upgrade its monopole because it never initially approved the monopole in the first place.[87] In 2004, Santa Clara County originally approved the Sprint permit to build this 70-foot-tall monopole in an unincorporated area near Campbell. Two years later, in 2006, Campbell annexed the land under the monopole. The monopole became a legal nonconforming use under the Campbell municipal code because it far exceeded the 45-foot zone

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[84] *See* CTIA COMMENTS, *supra* note 3, at 15; VERIZON COMMENTS, *supra* note 3, at 31.
[85] *See* PCIA COMMENTS, *supra* note 3, at 44.
[86] *See* CONDITIONAL USE PERMIT TO ALLOW THE CONTINUED OPERATION AND MODIFICATION OF AN EXISTING SPRINT WIRELESS TELECOMMUNICATIONS MONOPOLE, at 3 (Mar. 26, 2013), *available at* http://www.ci.campbell.ca.us/Archive/ViewFile/Item/158 [hereinafter "CAMPBELL MEMORANDUM"].
[87] *Cf.* PCIA COMMENTS at 45 (warning the Commission that local governments retroactively apply fall zones and setbacks to deny eligible facilities requests).

height limit.[88] Thus, Campbell merely required Sprint to obtain the necessary permit to continue to operate the monopole.

Second, Campbell approved the conditional use permit with only small changes to the proposed equipment. Campbell staff advised the Site and Architectural Review Committee that Section 6409(a) required permit approval but recommended that Sprint install the smallest equipment possible mounted as close to the pole as possible to mitigate the visual impact of the substantially larger equipment.[89]

Town of Hillsborough, California

CTIA presented a legally incorrect and factually incomplete anecdote about the moratorium in the Town of Hillsborough, California, when it claimed Hillsborough could extend its moratorium *ad infinitum*.[90] However, Hillsborough could not possibly extend its moratorium an additional year, much less *ad infinitum* as CTIA claims because California state law limits a moratorium to no more than twenty-four months.[91] Moreover, California law ensures checks and balances through a procedure that requires a jurisdiction to approve three separate legal ordinances at a public hearing and extended to the maximum term.

Moreover, CTIA did not disclose that Hillsborough enacted the moratorium specifically to allow time to draft a new ordinance in response to certain acts from various wireless applicants. For example, in this small town with only 11,000 residents, one DAS applicant literally tossed multiple incomplete permit applications with nearly $80,000 in checks on the City's public counter and then exited the building as an effort to trigger the time limits in the

[88] *See* CAMPBELL MEMORANDUM, *supra* note 86, at 2.
[89] *See* CAMPBELL MEMORANDUM, *supra* note 86, at 3.
[90] *See* CTIA COMMENTS, *supra* note 3, at 19.
[91] *See* CAL. GOV'T CODE § 65858 (West 2013).

2009 Declaratory Ruling. Hillsborough returned those abandoned and incomplete permit applications to the applicant. Hillsborough also plans to introduce a revised ordinance this month, with an expected end the moratorium within the next 30 to 60 days.

City of Livermore, California

Verizon complains that the City of Livermore, California, approved its permit request to upgrade some antennas after 168 days, but omitted to mention that it submitted its application eight days before Congress enacted Section 6409(a).[92] Just like its example in Albany, Verizon showcased a permit request in a false light because the application required the local government to adjust its policies and procedures to Section 6409(a) mid-review.

On February 14, 2012, Verizon submitted an incomplete permit request, and received a notice of incompleteness 19 days later. On April 26, 2012, Verizon asserted its rights under Section 6409(a) for the first time and Livermore staff met with Verizon fifteen days later to discuss how to proceed. Livermore administratively approved the permit request 57 days after it met with Verizon to discuss Section 6409(a). Although the entire process lasted 168 days, Livermore responded within the presumptively reasonable time after it conferred with Verizon to determine the local impact of the radically new federal law. These more complete facts show that Livermore acted reasonably and cooperatively under the highly uncertain regulatory circumstances.

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[92] *See* VERIZON COMMENTS, *supra* note 3, at 31.

EXHIBIT C

Comments Filed by City of San Marcos, California, Regarding the FCC's Notice of Proposed Rulemaking

In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies (WT Docket No. 13-238)

[appears behind this coversheet]

EXHIBIT C

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies	)	WT Docket No. 13-238
	)	
Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting	)	WC Docket No. 11-59
	)	
Amendment of Parts 1 and 17 of the Commission's Rules Regarding Public Notice Procedures for Processing Antenna Structure Registration Applications for Certain Temporary Towers	)	RM-11688 (terminated)
	)	
2012 Biennial Review of Telecommunications Regulations	)	WT Docket No. 13-32

COMMENTS FILED BY CITY OF SAN MARCOS, CALIFORNIA REGARDING THE FCC'S NOTICE OF PROPOSED RULEMAKING

Comment Date: FEBRUARY 27, 2014

Jack Griffin, City Manager | 1 Civic Center Drive, San Marcos, CA 92069 | P: (760) 744-1050 F: (760) 744-9520

INTRODUCTION

The City of San Marcos, California offers these comments in response to the Federal Communications Commission's (FCC) Notice of Proposed Rulemaking (NPRM) adopted and released on September 26, 2013.

Located 40 miles north of downtown San Diego in the foothills of northern San Diego County, the City of San Marcos has been one of the fastest growing cities in the region. Between the years 1980 and 1990, San Marcos more than doubled its population and the City is now home to nearly 85,000 residents across 25 square miles. Regional access to the City is provided by State Route 78, an east/west highway that links Interstate 5 with Interstate 15. Known as North County's educational hub, San Marcos

is also home to major educational institutions like California State University, San Marcos, Palomar College and the San Marcos Unified School District and several other higher education institutes that collectively serve more than 60,000 students. The City's key industry clusters include specialized manufacturing, biomedical devices and products, biotechnology and pharmaceuticals and information and communications technology.

San Marcos supports the thoughtful, detailed comments filed by the many municipal commenters (such as the City of Mesa, San Antonia, City of Alexandria, City of Eugene and those of the national municipal organizations like the League of California Cities) in this proceeding. Such comments address a wide range of issues and problems with Section 6409(a) and the Rule. San Marcos opposes the comments filed by the industry, such as PCIA, CTIA, Verizon, AT&T, among others.

Beginning in the 1980's, the City of San Marcos began permitting wireless telecommunication facilities. As the technology has advanced, so has the City's wireless infrastructure. Most notably, in the last three years, the wireless telecommunication facility operators in San Marcos have been replacing smaller antennas with new larger 6' to 8' antennas. Since the City does not regulate the technological capabilities of this equipment, beyond compliance with FCC regulations for RF emissions, little is known by the City of the capabilities of this equipment (i.e. to provide wireless broadband connectivity). To the best of our knowledge, the following eight companies own wireless telecommunication facilities within San Marcos and provide service: AT&T, T-Mobile, Verizon, Cricket, Sprint, Nextel, Crown Castle and TowerCo.

In San Marcos, most wireless telecommunication facilities have been constructed at a height of between 25 to 35 feet. In general, co-location on one of these facilities would place the colocated antennas at heights of between 20 to 12 feet. The service providers have given feedback to the City that such a low facility would not provide the coverage to address the service gap issue. As a result, colocation in the City is primarily done horizontally with additional wireless telecommunication facilities on the same site or additional antennas mounted at identical heights on existing buildings. Both examples given for "horizontal co-location" are treated as "new applications" and do not benefit from the rights provided by the Middle Class Tax Relief and Job Creation Act of 2012. In general, since the colocations are "new applications," the City processes these applications consistent with the provisions of the shot clock rule and PSA. Ninety days is *not* a sufficient amount of time to process an application. When the shot clock rule is violated by the City, more often than not, wireless telecommunication facility applicants will work with the City to complete processing of the application in lieu of legal recourse or tolling agreements.

IMPLEMENTATION OF SECTION 6409(a)

In its brief existence, Section 6409(a) appears to facilitate *de minimis* changes to legally established wireless facilities without much controversy. A diligent search revealed that only three cases even address the statute. The Commission should therefore find, at least at this early stage, that it should neither interpret the terms in Section 6409(a) nor adopt any related mandatory rules.

In the event that the Commission determines that it should exercise its regulatory authority with respect to Section 6409(a), San Marcos counsels the Commission to (1) narrowly interpret the statutory terms to afford them the narrow and common definition that Congress intended; (2) affirm the primacy of local authorities to define a "substantial" change; (3) bear in mind that the statute mandates a specific result without any reference to any specific process; (4) acknowledge local courts as the most appropriate and efficient means to resolve wireless land use disputes; and (5) consider the federalism and Tenth

Amendment limits on federal power over the States and their political subdivisions.

Additionally, although Section 6409(a) contains few words and virtually no legislative history, the Commission should not view it as a blank slate. Congress enacted Section 6409(a) within the context of the Telecommunications Act of 1996 ("Telecom Act"), and the Commission should interpret any new rules to govern Section 6409(a) in manner consistent with the policies, objectives, history, and well-developed case law connected with the Telecom Act. Section 6409(a) exists as a very narrow exception the rule of local authority explicitly reserved in the Telecom Act, and the Commission should not interpret the statute so broadly that the exception swallows the rule.

While service providers do not typically colocate on existing facilities in the San Marcos, the City currently uses a tiered system of permits that provide streamlined and ministerial approval processes for the least intrusive wireless telecommunication facility design (i.e. stealthed or concealed facilities not located in residentially zoned areas). For facilities that do not meet this criteria, a traditional discretionary permit is required (i.e. CUP). This tiered system creates an incentive for wireless telecommunication facility operators to propose the lowest impact facility in the least controversial location (not in residentially zoned areas of the City). In general, this system is well received by both the public and the wireless telecommunication facility operators; however it does not function without incident.

Residents in San Marcos receive public notification of a project for a wireless telecommunication facility when it is proposed at a site that requires a discretionary permit. As a result, these sites are often controversial. Most of the comments the City receives are related to Radio Frequency (RF) Radiation. The City has an extensive review process that requires the submittal of RF emissions modeling, independent review of the modeling to confirm compliance with FCC regulations and the submittal of a compliance report with field measurements within six months of becoming operational. Once this process is explained to residents, most of their concerns about RF emissions are addressed. On occasion, the City does receive an application for a facility with a design that is unacceptable. City staff is generally able to work with applicants to resolve these issues and either modify the project design, or find a suitable alternative site. On the rare occasion that the City receives a complaint from the public about the maintenance of a facility, these are addressed and corrected through the Notice of Violation - Cure Period approach of code enforcement. Maintenance issues are addressed at the time the wireless telecommunication facility operators pull building permits for antenna upgrades, which occurs about every five years. In the rare event that resolution is not found for citizen complaints, these issues have gone through civil litigation before the superior court, as was the situation with one horizontal colocation application processed by the City.

As cities and industry continue to successfully evolve best practices together and work towards streamlining the process for the collocation of, removal of and replacement of wireless transmission equipment , it is premature for the Commission to adopt narrow definitions for the terms in Section 6409 (a). Municipalities must retain the autonomy to determine specific process and because resident complaints are minimal and often resolved at a local level, local courts are the most appropriate and efficient means to resolve wireless land use disputes in San Marcos.

IMPLEMENTATION OF SECTION 332(c)(7)

The Commission also seeks comment on whether to modify its *2009 Declaratory Ruling* that interprets the term "reasonable time" as used in Section 332(c)(7)(B). For the most part, State and local

governments adapted well to the *2009 Declaratory Ruling*, and no factual record before the Commission provides a basis for change. The City of San Marcos recommends that the Commission should not adopt any new rules.

In the event that the Commission determines that it should exercise its regulatory authority with respect to Section 332(c)(7)(B), the City of San Marcos advises the Commission carefully preserve local control over and flexibility in the permit process to encourage government, industry, and community stakeholders to cooperate towards creative wireless solutions. Any finally-adopted rules must preserve enough local authority to bring wireless applicants to the negotiating table.

CONCLUSION

The City of San Marcos would like to thank the Commission for its efforts to better understand the practices and policies surrounding cities' management of public rights of way and the practices currently used to collocate wireless facilities. San Marcos strongly encourages the Commission to consider these comments, as well as those submitted by all cities, before taking any action that may adversely affect the rights of way authority of cities. The Commission has explicitly acknowledged that it does not intend to become a national zoning board, but the practical impact of the Draft Rules will likely result in that very outcome.

Respectfully submitted,
City of San Marcos

By: Jack Griffin, City Manager
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San Marcos, CA 92069

EXHIBIT D

Reply Comments of the City of Richmond, California

In the Matter of Acceleration of Broadband Deployment by Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting (WC Docket No. 11-59)

[appears behind this coversheet]

EXHIBIT D

CITY ATTORNEY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of:	)	
	)	
Acceleration of Broadband Deployment	)	WC Docket No. 11-59
Expanding the Reach and Reducing the Cost of	)	
Broadband Deployment by Improving Policies	)	
Regarding Public Rights of Way and Wireless	)	
Facilities Siting	)	

To: The Commission

REPLY COMMENTS OF THE
CITY OF RICHMOND, CALIFORNIA

The City of Richmond, California ("Richmond") respectfully submits these Reply Comments to the Commission in the above-entitled Notice of Inquiry ("NOI") proceedings.

Richmond has become aware that certain comments of Verizon and Verizon Wireless ("Verizon") submitted to the Commission in this NOI contain material factual errors and seriously distort the actual facts regarding Richmond's efficient, timely, and reasonable-cost processing of wireless site applications.

I
Matters of Fairness

Initially, Richmond notes that the allegations leveled by Verizon were never served on Richmond by Verizon. Richmond is aware that other municipal commenters in this NOI have also stated that the telecommunications industry has not served the allegations on the municipalities mentioned by the industry commenters. This attempt by the telecommunications industry to insert unsupported (and in various cases materially incorrect) allegations in the record without serving notice on the affected parties does not provide a sound basis or record upon which the Commission should act.

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Telephone: (510) 620-6509 Fax: (510) 620-6518 www.ci.richmond.ca.us

EXHIBIT D

II
Verizon Misstates Material Facts Regarding Richmond

Turning to the allegations raised by Verizon in connection with Richmond, Verizon states that "minor activities such as the addition of new antennas to an existing structure or other activities that do not effect (sic) any material change in the underlying structure must go through the same rigorous and time-consuming local zoning process as a new tower." (Comments of Verizon and Verizon Wireless @ Pg. 8 and fn. 12).

Richmond conducted a review of the wireless site applications tendered to it for the period of November, 2009 through September, 2011, after (as mentioned below) Richmond adopted a new comprehensive wireless ordinance addressing both industry and local concerns regarding process and siting of wireless telecommunications facilities. Of the 19 applications received during that period, Richmond approved 17 of them in an average of about 80 days, and at an average cost to the applicant of about $1,800. Only two of the 19 applications are still pending, with both now scheduled for review before the Planning Commission on October 6, 2011.

None of the 19 wireless siting applications received by Richmond during the past two years were tendered by Verizon. Given that Verizon has not participated in the City's wireless siting process for a period of years, it is disingenuous for Verizon to make clearly inaccurate claims about Richmond's wireless siting process and the efficient results flowing from Richmond's process.

III
PCIA Misstates Material Fact Regarding Richmond

Turning to an allegation raised by the Personal Communications Industry Association ("PCIA") in connection with Richmond, PCIA asserts that the City of Richmond, California has had in place a wireless facility siting moratorium since February, 2011. (Comments of PCIA Exhibit B, Section II @ pg. 6.) This is simply not true, and PCIA does not provide any source for its factually incorrect assertion.

The City did legally, prudently, and appropriately declare a wireless siting moratorium during the period it developed its current wireless siting ordinance (a development process that involved significant input from the wireless industry), but that moratorium was lifted on August 28, 2009, the same day the new wireless ordinance became effective. A further moratorium was declared and effective from February 1, 2011 to May 12, 2011, in order to revise the ordinance to address new concerns raised by Planning staff regarding aesthetics and public safety and welfare, including issues of compatibility and detriment to residential properties.

Richmond joins with other municipal commenters stating that PCIA's inaccurate claims should be rejected by the Commission.

IV
Use of Municipal Consultants is Useful in Speeding-up the Siting Process

PCIA also claims that various "consultants identified by the wireless infrastructure industry [are] obstructionists and problematic." Richmond joins with other municipal commenters stating that PCIA's claim should be rejected by the Commission.

As noted by the City of Glendale, California, "PCIA's allegations are vague and unsubstantiated. They fail to identify which consultants are identified, who identified them, and what they may have done to create the so-called barriers against deployment of wireless facilities." (Reply Comments of the City of Glendale, California @ Pg. 2.)

Richmond has only occasionally used municipal consultants to assist in the wireless siting process, but when Richmond has used municipal consultants, their use has been to provide specialized technical or legal expertise that was simply not available within the city government.

Given the increasing complexity of signal coverage and use capacity issues raised by wireless carriers in wireless facility siting applications, and in light of the various federal and state court decisions that shape wireless siting practices in California, the use of municipal consultants by Richmond and other city governments can actually speed-up the wireless siting process by identifying matters that can quickly be resolved by governments and wireless applicants. Richmond notes that while it only rarely uses municipal consultants in the wireless siting process, the opposite is true for wireless carriers who almost exclusively use local consultants to apply for wireless siting permits.

V
Conclusions

The process of wireless facilities siting is complex from a legal standpoint and from a community aesthetics viewpoint. It requires a reasonable balance of local encouragement and reasonable local restraints on unfettered proliferation. Richmond has struck a balance of these elements that respects the interests of all concerned, not merely the community or the wireless industry.

Richmond believes that good national guidance and policy comes from factually accurate and reliable information that is broadly applicable rather than industry-sponsored innuendo regarding a relative handful of communities. Accordingly, Richmond believes the Commission should not rely on factually inaccurate and unreliable information and information that is far out-of-date and only applicable to a minute number of governments as any basis for crafting new rules and policies in wireless tower siting matters.

Richmond supports the idea of the Commission serving as an information resource for local governments in wireless tower siting matters.

EXHIBIT D

The City of Richmond thanks the Commission for its consideration of these Reply Comments.

THE CITY OF RICHMOND, CALIFORNIA
by

Randy Riddle
City Attorney

Date: 9/30/11

The City of Richmond, California
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The United States Conference of Mayors, rthaniel@usmayors.org

EXHIBIT E

Comments of the League of Oregon Cities

In the Matter of Acceleration of Broadband Deployment by Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting (WC Docket No. 11-59)

[appears behind this coversheet]

EXHIBIT E

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Acceleration of Broadband Deployment:	)	WC Docket No. 11-59
Expanding the Reach and Reducing the	)	
Cost of Broadband Deployment by Improving	)	
Policies Regarding Public Rights of Way and	)	
Wireless Facilities Siting	)	

COMMENTS OF THE LEAGUE OF OREGON CITIES

These Comments are filed by the League of Oregon Cities in response to the Notice of Inquiry (Notice), released on April 7, 2011, in the above-entitled proceeding.

1. INTRODUCTION

The League of Oregon Cities (the League) is an intergovernmental entity under Oregon Revised Statutes (ORS) Chapter 190. Originally founded in 1925, the League is a voluntary statewide association representing all of Oregon's 242 incorporated cities. The League's mission is to be the effective and collective voice of Oregon's cities and their authoritative and best source of information and training. The League fulfills that mission through advocacy for city government at the state and national levels and by providing information, technical assistance, training, conferences, and workshops to local elected officials and city staff. Simply put, the League aims to protect its members and to provide them with timely information and resources on matters of concern and interest. The outcome of this Notice is a matter of great concern for Oregon cities.

2. OREGON CITIES ARE ACTIVELY SUPPORTING BROADBAND INITIATIVES

There are several broadband related initiatives in Oregon. Some have been completed while others are just underway. A number of public broadband initiatives have taken shape out of the need for

broadband service in communities that were not served or underserved by private broadband providers.[1] Other public broadband initiatives in Oregon are focused on strategically using the broadband that communities have or will have. These initiatives indicate that local government in Oregon supports and encourages broadband deployment in their communities.

The League recently finalized a report on municipal involvement in the funding, building, and operating of broadband networks. In summary, the findings of the report indicate that Oregon cities are:

(1) Aware of the significance of broadband, and

(2) Willing to go to great lengths to bring broadband to their communities.

Accordingly, and contrary to the assumptions in the Notice, the League's report did not find that cities are what stand in the way of broadband deployment. Instead, the League's report found that the obstacle to broadband deployment is hesitation on the part of industry to make capital investments that do not immediately produce positive returns. The League's Oregon Municipal Broadband report is attached to these comments for the Commission's convenient reference. (See Appendix A.)

In addition to the municipal broadband initiatives referenced in the League's attached report, there are a number of similar initiatives currently underway in Oregon. Many such initiatives are born out of the Oregon Broadband Advisory Council (OBAC). OBAC was created by the 2009 Oregon legislature and its purpose is "to help ensure the implementation of statewide broadband strategies" and "to encourage coordination and collaboration between organizations and economic sectors to leverage the development and utilization of broadband for education, workforce development and telehealth, and to promote broadband utilization by citizens and communities."[2]

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[1] One such example is found in the Oregon cities of Monmouth and Independence. In 1999, the cities of Monmouth and Independence asked their local cable company when high-speed Internet would be introduced to the cities. The cable company responded that services would not be available any sooner than the year 2020. Both cities realized that to be economically viable, the cities needed high-speed Internet service much sooner. This realization spurred the creation of an intergovernmental fiber network which provides voice, video, and data services in both cities. For more details about this story and similar ones, please refer to the League's report attached as Appendix A.

[2] See OBAC's website: http://www.oregon4biz.com/The-Oregon-Advantage/Telecommunications/oregon-broadband-council/

City representatives, including League staff, regularly attend OBAC meetings. Of particular relevance to this Notice, the conversations at OBAC meetings do not focus on reform of local policies related to rights of way management and wireless facilities siting. Rather, the conversations at the council meetings focus on the real issues facing broadband deployment in Oregon: adoption and utilization of broadband.

To address the issues of broadband adoption and utilization, the Oregon Public Utility Commission (PUC), working with OBAC, has developed and will implement a Broadband Outreach and Strategic Planning Project. This project is funded through grants from the National Telecommunications and Information Administration's State Broadband Data and Development program. The key deliverables of the project include a broadband strategic planning process template and as many as eight local broadband strategic plans, which in addition to the template, can be used as models for other communities.[3] The ultimate goal of this project is to increase broadband adoption and utilization in Oregon and to develop a strategic planning process that can be replicated by communities throughout the state.

This level of involvement by cities in activities that seek to encourage and effectuate broadband deployment is a true representation of the importance cities have placed on bringing broadband to their communities. Cities would not invest their limited resources in these types of activities if they were not truly committed to broadband deployment. It is important for the Commission to recognize and keep in mind this level of support by cities towards broadband deployment as it considers the various responses it receives to the Notice.

3. CITY POLICIES ARE NOT OBSTACLES TO BROADBAND DEPLOYMENT

It is not city policies that are creating obstacles to the accelerated deployment of broadband, but rather the real obstacles are the cost associated with investing in broadband infrastructure. The actual cost of investment may be increased and the cost/benefit analysis may be complicated when geographic,

[3] See OBAC's website for January 27, 2011 approved minutes, page 7
http://www.oregon4biz.com/The-Oregon-Advantage/Telecommunications/oregon-broadband-council/2011/0111meeting/012711Minutes.pdf

demographic, and geological factors enter the equation. It is common knowledge that flat, clustered, densely populated areas in the country are the areas that have the most broadband services. This is not a coincidence.

The League is concerned that the Commission overlooks or minimizes the importance of the geographic, demographic, and geological obstacles that cause the private industry to hesitate before investing in broadband services. The League's concern is underscored and validated particularly now that the Commission has resources such as the National Broadband Map, which supports the conventional wisdom that unserved or underserved areas are those areas located outside of areas deemed by the private industry to be cost-efficient.

Using the state of Oregon as an example, when the Commission looks at the Oregon Broadband Map[4] it will see that broadband is readily available in all of Oregon's densely populated areas. According to the 2010 census, Oregon's statewide population is 3,831,074. Approximately 58% of Oregon's population lives in the Portland metro area.[5] After the Portland metro area, the second largest population cluster is found in the Willamette Valley (Salem, Corvallis, and Eugene/Springfield). These urban areas and other urban areas in Oregon with larger population bases are served by broadband providers.

Conversely, looking at the Oregon Broadband Map, the Commission will see large swaths of land in the state that do not have broadband services. These areas do not have large population centers and are not readily available for broadband development. For example, the federal Bureau of Land Management (BLM)[6] oversees 15,707,047 acres or 25% of the total land area in Oregon.[7] This land is forest land not

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[4] See the Oregon Broadband Map website: http://broadband.oregon.gov/StateMap/index.html

[5] Portland Metro Area population (2,226,009 based on 2010 census results) divided by Oregon's total population count (3,831,074 based on 2010 census results).

[6] The mission and function of the federal Bureau of Land Management, a bureau under the U.S. Department of the Interior, is summarized on its website (http://www.blm.gov/wo/st/en.html) as follows: *"To sustain the health, productivity, and diversity of America's public lands for the use and enjoyment of present and future generations...The BLM's multiple-use mission, set forth in the Federal Land Policy and Management Act of 1976, mandates that we manage public land resources for a variety of uses, such as energy development, livestock grazing, recreation, and timber harvesting, while protecting a wide array of natural, cultural, and historical resources...."*

available for development and primarily used for recreation, sustainable lumber production, research, and conservation purposes. Accordingly, these unserved areas do not pass a broadband investment cost/benefit analysis, which is the real reason why broadband development has not occurred in these areas.

With this better understanding of the Oregon Broadband Map in place, it should be easier for the Commission to recognize that local policies related to management of the right of way and wireless facilities siting are not the obstacle to accelerated deployment of broadband in Oregon. In populous cities, one will typically find more rigorous management of rights of way in general due to the fact that there will necessarily be more competing interests.[8] Conversely, in remote areas with smaller populations the need for as rigorous management is substantially less. Nonetheless, as pointed out in the preceding paragraphs, unserved or underserved areas tend to be rural areas where, at least in Oregon, counties may determine the location of utilities in the rights of way but may not charge rates.[9] Thus, if private broadband providers cite high rates and delays as obstacles to broadband deployment, then the FCC must require data to back up these allegations. In Oregon, the argument that local government prevents broadband deployment by charging high rates for use of the rights of way and by delaying facilities siting applications simply cannot be supported when all of the evidence points to a contrary conclusion.

4. CITIES KNOW HOW BEST TO MANAGE THE PUBLIC RIGHTS OF WAY

Rights of way are valuable and important government resources, which are best managed by the entities closest to them, local governments. Local governments have the unique ability to take into consideration all of the various concerns, values and desires of local citizens to maximize the value of this important resource. The Commission should not overlook this important aspect of the policy decision before it with this Notice.

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[7] According to a 2009 BLM Facts publication, in Oregon, the BLM is responsible for 15,707,047 acres. Oregon's land area is 98,381 square miles. 1 square mile equals 640 acres. 98,381 multiplied by 640 equals 62,963,840 acres. 15,707,047 acres divided by 62,963,840 acres equals 0.249 or 25%.

[8] For example the City of Portland has over 50 franchised entities including over 30 telecommunications and cable providers. http://www.portlandonline.com/cable/index.cfm?c=33150

[9] ORS 758.010(1)

EXHIBIT E

Oregon is a home rule state and as such Oregon cities through their local charters have the authority to protect and manage the public's interest in the public rights of way. In addition to charter provisions and ordinances, Oregon cities are mandated to comply with state laws that impose further requirements on cities. For instance, Oregon cities are required by state law to adopt comprehensive land use plans and to adopt zoning and land use codes to manage growth and development in their communities.[10] Oregon cities are also required by statute to provide certain urban services, which currently do not include broadband services.[11] Further, Oregon statutes assign primary regulatory responsibility for control of local highways, streets, roads, and alleys within incorporated cities to the city's governing body.[12] As such and as designated by statute, Oregon municipalities have responsibility for the placement, maintenance, and control of traffic control devices necessary for the safe and expeditious regulation and guidance and warning of traffic conditions.[13]

Regardless of the many requirements that local rights of way policies must comply with and all of the public services and utilities that cities must accommodate in the right of way, Oregon cities through their local policies accommodate broadband and similar services in the public right of way. These local policies have been created and shaped through the local democratic process. For this reason, the League urges the Commission to closely listen to the stories of local governments through this Notice process. In doing so, the Commission will find that the local policies that it seeks to preempt are in place to protect the best interests of communities as expressed by the citizens of those communities. Further, the

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[10] ORS 197.175(2)

[11] ORS 195.065(4) For purposes of ORS 195.020, 195.070, 195.075, 197.005 and this section, "urban services" means:
(a) Sanitary sewers;
(b) Water;
(c) Fire protection;
(d) Parks;
(e) Open space;
(f) Recreation; and
(g) Streets, roads and mass transit.

[12] ORS 810.010(4)

[13] ORS 810.210(2)

Commission will discover that the significance of broadband and its availability is well understood by cities and that this understanding is reflected in local decisions and practices.

Finally, the Commission must recognize that management of the right of way is the management of a local resource, which needs to be protected and utilized in the best interests of the local citizens. One way local governments can use this valuable public resource is by requiring compensation for the use of the right of way, which helps to support the budgets of local governments. In Oregon, cities have the authority to allow private use of public rights of way in exchange for compensation for that use. Compensation comes in the form of fees collected through franchise agreements and/or right of way ordinances. These fees are typically a revenue source upon which cities rely to provide valuable services to the citizens in their communities. While the size of this revenue source varies from city to city, any loss in revenues during this challenging economic period is a decision that must be made by the local government.

The decision about how to set these rates and how much they will be is a decision best made at the local level and a decision that Oregon cities have the authority to make. The federal government should not step in and create a one size fits all policy that very well might contradict the concerns, values and desires of the citizens to whose benefit this public resource should be used. Accordingly, the Commission should not undertake a process by which it would deprive cities the authority to collect compensation for the private use of the public rights of way.

5. CONCLUSION

The League understands that the Commission is charged with ensuring that broadband is deployed in a reasonable and timely fashion. However, any perception of an impediment in the deployment of broadband related to local rights of way and facilities siting regulations is simply that—a perception. That said, the message that the League would like to leave with the Commission is that there is substantial evidence indicating that Oregon communities without broadband are not served because private broadband providers have determined that the infrastructure costs of deploying broadband to these areas is too high and the take rate would be too low to justify the costs. Ironically, these unserved

areas are also communities that tend to have the least amount of local regulations. Thus, local policies related to management of the public rights of way and wireless facilities cannot be obstacles to broadband deployment.

Through this process, the Commission is certain to find recurring themes among the comments filed by local governments and organizations that support local governments. These recurring themes should not be dismissed as repetitive but instead should be treated as significant and critical. The fact that they are recurring and repetitive is an indication that the themes are not isolated exceptions in certain parts of the country, but in fact reflect the true obstacles to achieving greater broadband deployment.

Finally, the League would like to thank the Commission for the opportunity to comment on how local governments are managing the rights of way to facilitate community development and expansion by serving the broad variety of users who can serve more efficiently by using the citizen's property. The League appreciates the Commission's efforts to better understand the practices and policies surrounding cities' management of public rights of way. The League strongly encourages the Commission to consider the League's comments, as well as those submitted by all cities, before taking any action that may adversely affect the rights of way authority of cities. The League respectfully reminds the Commission that it must resist moving forward in any other context to act on any of the issues raised in the Notice until the record in this proceeding is complete.

Respectfully submitted,
The League of Oregon Cities

By: Rebekah Dohrman
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EXHIBIT E

Appendix A:

Oregon Municipal Broadband
A 2011 Report by the League of Oregon Cities

EXHIBIT E

LEAGUE OF OREGON CITIES

OREGON MUNICIPAL BROADBAND

JULY 2011

Published by the League of Oregon Cities

EXHIBIT E

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Acknowledgements

Special thanks to the city and other government contacts who provided information and assistance to LOC in the development of this report. In some cases, these contacts provided technical advice and full review of the report. (*case study city)

- City of Ashland
- City of Astoria
- City of Bandon
- City of Cascade Locks
- City of Coos Bay*
- City of Cottage Grove*
- City of Eugene
- City of Forest Grove
- Cities of Independence and Monmouth*
- City of Lebanon*
- City of Oregon City
- City of Portland
- City of Redmond
- City of Sandy*
- City of Sherwood*
- City of The Dalles*
- City of Tigard*
- City of Yachats
- Clackamas County
- Lane Council of Governments
- Oregon Business Development Department

Special thanks to Rebekah Dohrman, League of Oregon Cities Assistant General Counsel, for the development of the "Legal Authority, Restrictions and Requirements" section.

Introduction

Recognition of telecommunications infrastructure as a vital service in Oregon began in 1991 when the Task Force on Telecommunications was established. In 2010, this priority was reemphasized with the creation of the Oregon Broadband Advisory Council, whose goal is to develop and implement statewide broadband initiatives.

In today's digital age, high-speed broadband services are crucial to economic development, job creation, education, health care, civic engagement, government transparency and responsiveness, as well as public safety and emergency preparedness. If broadband services are not available or are insufficient, businesses may pass over a city when assessing potential locations for new offices and facilities. Even if a city expects enhanced broadband services in the next few years, businesses cannot afford to wait and may choose to make investments elsewhere.

Beyond the business sector, the general public is growing more accustomed to having Internet access everywhere they go. Not only do people want access to traditional local government services such as libraries and parks, but they also want to check their email while they use these city services.

The main purpose of a city is to provide essential services to a community. Due to insufficient services provided by private utilities, some cities have classified broadband as "essential" and have chosen to add broadband to the list of their city services. Even among those that have chosen to enter the realm of telecommunications, the roles and models used vary greatly. Some cities have implemented a city utility, others have entered into partnerships with other governmental entities and private providers, and some provide services only to other governmental entities. Some cities have chosen to provide services directly to the customer, while others lease network space to private service providers.

In addition to these variations in implementation, the type of broadband access varies as well; some cities have chosen to construct "wired" fiber-optic networks, while others provide free wireless broadband services to key areas around the city, including city hall, parks and downtown business areas.

About this Report

There are many options available to cities that want to provide broadband services, and the purpose of this report is to provide general information to those cities. The report will discuss the link between broadband expansion and economic development, while posing several policy and legal issues cities should consider before deciding to provide these types of services. To assist readers with technical terms, there is a glossary on page 48.

This report also provides a general overview for the various models based on the actions and experiences of other Oregon cities that have chosen to provide broadband services. Additional information on any of the case study cities can be obtained by contacting the League of Oregon Cities.

Broadband & Economic Development

The Link Between Broadband & Economic Development

Although most agree that broadband is playing an ever increasing role in the global economy, several studies have attempted to assess whether the expansion of broadband services truly is an effective economic development tool.

Broadband and the U.S. Economy

- 62% of American workers rely on the Internet to perform their jobs.
- The U.S. Bureau of Labor Statistics forecasts that jobs depending on broadband and information and communication technologies will increase by 25% from 2008 to 2018.
- One third of the per capita GDP growth can be attributed to telecommunications infrastructure investments.
- Information and communications technology contributed 59% of growth in labor productivity from 1995 to 2000 and 33% from 2000 to 2005.

Source: Portland Broadband Strategic Planning Briefing Book (2010, Sect. 2, p. 2)

The city of Portland's "Broadband Strategic Planning Briefing Book" (2010) notes that "broadband is becoming a prerequisite to economic opportunity for individuals, small businesses and communities. Those without broadband and the skills to use broadband-enabled technologies are becoming more isolated from the modern American economy" (Section 2, page 2). Because of this reality, Portland is developing a comprehensive Broadband Strategic Plan to keep pace with future telecommunications and economic trends.

The Briefing Book examines many surveys and studies linking broadband and economic development. One objective of the Portland Broadband Strategic Plan is to "positively impact the policies, actions and directions of other Oregon communities and of the state as a whole" (Section 1, page 2). The Briefing Book helps fulfill this objective by providing other cities with information and resources on broadband, especially regarding economic development. Any city interested in expanding the provision of broadband services in their community should review the Portland Broadband Strategic Plan documents (see Resources section, page 45).

The Portland Briefing Book references a study conducted by the Public Policy Insitute of California (PPIC), "Does Broadband Boost Local Economic Development" (Kolko, 2010). The study found a very strong, positive relationship between the expansion of broadband and job growth, noting that the relationship is stronger for certain industries such as utilities, finance, insurance, scientific/technical, and other professional services. The study further noted that job growth after broadband expansion is not as strong in jobs that rely on local demand, such as retail stores or entertainment services. In fact, these types of businesses could be negatively affected by better connecting local consumers to the global market.

According to the PPIC study, the positive relationship is stronger in areas of lower population density, the theory being that the introduction and/or expansion of broadband connects these areas to a larger market. However, even areas of high population density do experience job growth after broadband services are expanded.

One interesting point made by the PPIC study was that even though broadband is linked to job growth, the study did not find a connection between broadband expansion and higher local employment rates or wages (Kolko, 2010). Some of the new jobs may not filled by current city residents, especially if the new industry requires a highly skilled workforce in a specific field.

Several of the cities in the Oregon municipal broadband case studies, however, have experienced broader economic benefits than what is presented in the PPIC study. For example, the city of Sandy expanded its municipal broadband services, SandyNet, to a nearby resort, which in turn was able to host larger business conferences. The resort then created more jobs to accommodate their business growth, and these jobs were filled mostly by Sandy area residents. The attendees at these conferences also became tourist patrons at local restaurants and businesses (see case study, page 25).

Another example can be found in The Dalles with the completion of QLife, an intergovernmental fiber network. The enhanced services provided by QLife attracted Google's attention, and the company chose to locate a new facility within the city. Due to the technical scope of the work needed at the facility, some jobs were filled from out-of-city recruitments. However, other jobs were filled by current city residents. In addition to job growth, the location of a highly visible business puts The Dalles on the map as a desirable place to locate. Even though some of the new jobs were not filled by local residents, the city benefits from the indirect economic impacts related to the new jobs, residents and income (see case study, page 33).

Local broadband projects have had positive impacts on cities throughout the nation. In 2009, The National Association of Telecommunications Officers and Advisors (NATOA) put together a briefing for the Federal Communications Commission (FCC) which highlighted several examples. Among these examples was Bristol, Virginia, which found its local economy drastically changing as the tobacco, textiles, coal mining and agriculture industries were in decline. The city decided to rebuild its economy on a foundation of advanced telecommunications infrastructure and services. In 2001, the city began building a fiber-to-the-home network, and by 2009 this system served more than 65 percent of city residents and businesses. This broadband network has begun attracting new employers, including two businesses which will bring in approximately 1,500 jobs that pay twice the average local wage. More information on Bristol, Virginia, as well as other examples from the NATOA briefing can be found in the Resources section on page 45.

Recent evidence shows there is a link between broadband and economic development. However, the issue of whether a city should become directly involved in the provision of broadband services is complicated by several factors, including the current local economy, skills of the workforce, and the city's economic goals (e.g. create new jobs for current residents). Regardless, broadband is crucial to national, state and local economies.

Broadband Services in the U.S.

As the global economy changes, it appears that broadband will play an increasing role in future economic markets. Despite this clear trend, the United States is lagging behind many countries in terms of broadband adoption and availability, which could have devastating impacts on the nation's recovering economy. In 2010, the United States was ranked 15th worldwide in terms of broadband penetration, whereas 10 years ago the U.S. ranked number one (Meinrath & Losey, 2010).

> *"America's record in expanding broadband communication is so poor that it should be viewed as an outrage by every consumer and business person in the country. Too few of us have broadband connections, and those who do pay too much for service that is too slow. It's hurting our economy, and things are only going to get worse if we don't do something about it."*
>
> *Michael J. Copps, Federal Communications Commission Member (2006)*

According to a study conducted by Pew Internet (Smith, 2010), after years of double-digit growth in broadband adoption, the U.S. saw a growth rate of only 3 percent from 2009 to 2010. As part of the solution, the American Recovery and Reinvestment Act (ARRA) designated $7.2 billion to broadband expansion projects, as well as nationwide mapping of broadband availability. The Oregon Broadband Advisory Council (2010) reports that $52 million was awarded to Oregon-based broadband projects. Of that $52 million, Oregon local government projects received the following: the city of Sandy received a grant/loan award of $749,085; Clackamas County received a grant of $7.8 million; Crook County received a grant of $3.9 million; and the Lane Council of Governments was awarded a grant of $8.3 million (see page 23 for more information).

Download Speeds
(Hours: Minutes: Seconds)

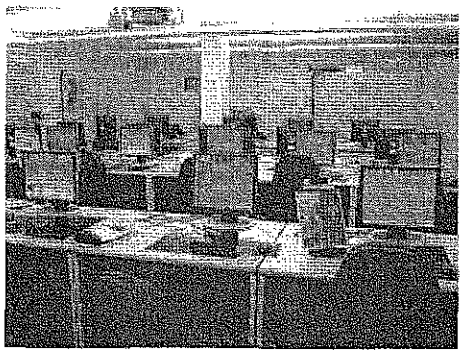
Internet Speed	Movie File (1,000 MB)	Music File (5 MB)
1 Mbps	2:13:20	0:00:40
4 Mbps	0:33:20	0:00:10
25 Mbps	0:05:20	0:00:01
100 Mbps	0:01:20	< 0:00:01

As mandated by the ARRA, the Federal Communications Commission published its National Broadband Plan in 2010. The core principle of the plan is that "broadband is a foundation for economic job growth, job creation, global competitiveness and a better way of life" (page xi). A goal of this plan is to have universal broadband available to all U.S. households by 2020, with a minimum download speed of 4 megabits per second (Mpbs) and upload speeds of 1 Mbps. Furthermore, the FCC wants 75 percent of the population to have affordable access to download speeds of 100 Mbps, and 50 Mbps upload speeds. Even with the achievement of these goals, the U.S. may still lag behind – many countries had already met these standards by 2010, including Taiwan, Denmark and the U.K. (Meinrath & Losey, 2010).

Broadband adoption rates show part of the competitive issue facing the U.S. economy, but the cost and service levels within the U.S. show a dreary outlook. Compared to other countries, U.S. citizens pay more for broadband services, but receive substantially lower speeds. The FCC found that the high cost of services is one barrier preventing or discouraging some U.S. households from subscribing to broadband services (Meinrath & Losey, 2010). A competitive market can help lower the cost of services, but for communities that are still struggling to find one provider, additional private provider competition may never materialize. According to the FCC's National Broadband Plan (2010), areas that include 75 percent of the nation's population

are likely to have only one service provider that can provide top-speed Internet services. This paints a dire picture for the smaller, rural areas around the country, and in Oregon.

Broadband Services in Oregon



In 2009, the U.S. Department of Commerce reported that Oregon was ranked 8th nationally for broadband reach, with 70.1 percent of homes utilizing high-speed Internet access. A 2010 survey conducted by the Opinion Research Corporation shows even higher statistics for Oregon: 88 percent of Oregon adults use the Internet, 85 percent have Internet access at home, and 82 percent have broadband access.

Using a different broadband indicator, established by the Information Technology and Innovation Foundation (ITIF, 2010), Oregon was ranked 21st nationally. The indicator in ITIF's report, 2010 State New Economy Index, evaluates the availability of broadband services in the 50 states as well as the cost of services. A high score means affordable broadband services are widely available throughout the state.

The ITIF report found that states with a higher population density tended to have a higher broadband score. The lower population density around much of the state of Oregon may explain the lower ranking, meaning many Oregonians do not have affordable broadband available in their communities.

Private providers tend to offer more services to areas with a higher population density, higher household income, and flatter terrain (Kelko, 2010). This leaves some areas around the country and around the State of Oregon "underserved" in terms of broadband availability. In some cases, the underserved must decide what role cities should play in the expansion of local broadband services.

The Role of Cities in Broadband Services

In the 2010 National Broadband Plan, the FCC stated that 96 percent of households are served by two or fewer providers. In Oregon, there are still a handful of cities that have no broadband options and many that have insufficient services from one provider. The goal of universal availability by 2020 may be too far off for some cities. For many of the Oregon cities providing broadband, the local providers' estimated date for providing services, or the inability to provide a date at all, prompted the discussion of whether these cities should provide broadband services.

> *Government's role is to let the market meet whatever needs it can, work with the market (public/private partnerships) when appropriate, and fill the void when the private sector offers inadequate solutions.*
>
> *Sonja Reece, Councilmember of Normal, Illinois & Chair of the National League of Cities Information Technology & Communications Steering Committee (2007)*

FCC Broadband Tiers (2008)

Tier	Rate
1	200 Kbps up to 768 Kbps
2	768 Kbps to 1.5 Mbps
3	1.5 Mbps to 3.0 Mbps
4	3.0 Mbps to 6.0 Mbps
5	6.0 Mbps to 10.0 Mbps
6	10.0 Mbps to 25.0 Mbps
7	25.0 Mbps to 100.0 Mbps
8	100.0 Mbps and beyond

Source: Federal Communications Commission: Order 08-89

Furthermore, the 2020 goal of universal 4 Mbps services will bring many areas to today's current standard of "high-speed," which is currently tier 4 in the FCC's categorization of broadband services. Today's standards may be insufficient to accommodate the demands of a mobile, online constituency in 2020. The public wants more access and faster speeds. For example, Tigard launched its free limited Wi-Fi service due to the demand from local citizens (see case study, page 37).

In 2005, a study found that 616 of the 2,007 municipal electric utilities in the United States were providing some sort of communications services (Ford, 2005). Many municipal electric utilities looked to telecommunications as a way to stay competitive after deregulation.

In Oregon, there are at least eight cities providing for-fee broadband services through a city utility or an intergovernmental partnership. Two of these cities also operate electric utilities. The main reason these cities chose to enter the telecom businesses was to facilitate economic development and to fill a gap in broadband services. In 2001, dial-up Internet was the only broadband option for Sandy residents. The SandyNet broadband utility filled a void, helped recruit several businesses, and prompted the introduction of additional services from local providers (see case study, page 25).

Private broadband providers are companies that need to make a profit. Therefore, decisions on how and when broadband services are introduced or expanded are made based on the bottom line. If a city is not densely populated, or if a city has difficult terrain, it will be more expensive for local providers to deploy services, thereby cutting into the profit margin.

The mission of cities, counties and other non-profits is to serve the needs of the local community, not shareholders. As stated in a 2011 report by Chris Mitchell of the New Rules Project, the United States is facing a broadband service monopoly, and municipal and community networks provide a way to increase competition and enhance services in local communities.

Municipal broadband services can create competition and help increase broadband services while lowering the costs. Ashland citizens have two choices for broadband: municipally-owned Ashland Fiber Network, and privately-owned Charter Communications. Based on a survey of sales flyers and promotional materials collected for cable television services offered in Ashland, Talent, Phoenix and Medford between 2000 and 2006, Ashland customers (either Ashland Fiber Network or Charter) saved at least $10 per month compared to customers in the other cities. With a cable TV penetration rate in Ashland of approximately 67 percent, this translated into a minimum annual savings of $714,000 for customers in Ashland during that time due to the presence of competition.

The cities in Oregon providing broadband services have thus far been successful in the development, implementation and management of their broadband networks. Oregon municipal broadband utilities are financially stable, and broadband service competition within the cities has increased. The recent economic crisis has put a damper on job growth, but most of these cities

are hopeful that as the economy strengthens, so will their local economies, due in part to the availability of broadband services.

However, the role of a city in local broadband does not need to be as extensive as building a citywide broadband network. Several cities in Oregon have chosen to take on another role, such as forming a public/private partnership or creating a free Wi-Fi network for local residents and businesses. These endeavors can also enrich the community and business life of a city.

Policy Considerations

There are many policy issues to consider before a city begins providing broadband services. These are not decisions that should be made quickly, and both technical and legal consultation should be involved in the process.

Below are a few key questions to help begin the conversation regarding city broadband services. See Appendix A (page 43) for a visual flow chart which will help cities walk through some of these questions and make a more informed decision regarding their city's role in broadband services.

The Need for Broadband Services

What is the need for broadband services in a city?

Need does not necessarily mean lack of service. In today's digital economy, a city needs fast, affordable broadband services to compete in business recruitment and retention.

If there are already affordable services provided within a city, a new city broadband utility or partnership will be coming into the market late, and the investment may not pay out as well. However, a city could still consider providing free Wi-Fi in parts of the city as a service to citizens, and to help promote certain areas of town (e.g. parks, city hall and downtown businesses).

If there is a serious unmet need for broadband services and the city council agrees that broadband is an essential service, cities could consider the option of providing broadband services to the community as either a city utility, or in partnership with another city, governmental entity or a private provider.

If a city is unsure of the level of local broadband services, the Oregon Public Utility Commission developed an interactive map of broadband availability around the state. In addition, the National Telecommunications and Information Administration (NTIA) developed a national interactive map of broadband availability that includes Oregon. Using these maps, city officials can view the number of providers offering services by address, city, county or other selected areas. Cities can also search coverage areas, search by broadband technology, and run speed tests on local current Internet connections. For more information on these map websites, see the Resources section on page 45.

To evaluate the affordability of services, the Citizens' Utility Board of Oregon has developed a database showing landline phone, mobile phone and Internet rates by zip code. For more information on this website, see the Resources section on page 45.

In order to help assess whether the current services are affordable and fast, a city should hire a consultant to conduct a feasibility study and market analysis. Several of the Oregon cities with broadband networks conducted these types of studies before building their broadband networks.

Encouraging Private Broadband Services

Are there ways a city can encourage the introduction or expansion of private broadband services?

If there is a need for broadband services but the city council is reluctant or there is no interest in building a network or providing services, cities could consider options to attract providers to the city, thereby providing initial services or encouraging competition to enhance services and reduce prices.

State Programs

Many cities have used enterprise zones as an economic development tool. Some of these enterprise zones are given an additional status of "e-commerce zone," which provides additional incentives to further encourage development in electronic commerce. This incentive cannot be used directly for private broadband network expansion – as in the laying of infrastructure. A local telecom provider could use the e-commerce zone status for purchasing equipment and other hardware needed to provide broadband services. Furthermore, a city could use the program as a tool to recruit more e-commerce businesses that will utilize the current provided broadband services, as well as create a need and demand for increased broadband service levels.

E-commerce zones give a qualifying business a credit against their state income or corporate excise tax liability. The credit equals 25 percent of the qualifying business's capital cost in a given tax year for electronic commerce investments within the designated area. This e-commerce tax credit is in addition to the standard enterprise zone exemption from local property taxes. For more information on e-commerce zones, see the Resources section on page 45.

Strategic Planning

The city of Portland is developing a broadband strategic plan (see Resources section, page 45). One major goal of this project is to assess the role the city can play in the development of broadband over the next 10 years. According to Portland's Broadband Briefing Book (2010), the strategic plan will include the adoption of city policies and initiatives which help support broadband expansion for Portland businesses. This plan also includes incentives Portland can offer that encourage the enhancement and expansion of broadband services.

Another key feature of Portland's broadband strategic plan is to aggregate the need of the local residents and businesses. The city plans to contact key institutions, such as schools, colleges and health care facilities, to get a pulse on the need for services. The city can use this information to talk with private providers and illustrate there is a ready-made demand for services.

Other City "Recruitment" Efforts

Other cities have successfully "recruited" private providers. Within the last 10 years, the city of Bandon formed an exploratory committee and issued an RFP for a private partner to work with the city to provide broadband services. The owner of ComSpan, a local telephone company in Roseburg, also owned a business in Bandon and chose to bring broadband services there.

Around the same time, the local telephone company began providing DSL in Bandon. ComSpan then became an independent provider with no formal partnership or investment from the city. The city treated ComSpan the same as the local telephone and cable companies in terms of franchising. However, the city provided incentives to ComSpan by expediting the permit process, leasing space to ComSpan for offices and equipment, and switching the city over to ComSpan's telephone and Internet services. Even though there is no formal partnership, ComSpan and Bandon have found other ways to support each other.

Similarly, within the last 10 years the city of Forest Grove developed a limited-area, free Wi-Fi network. The network was very affordable to deploy and maintain, so the city began discussing expansion. Just the discussion was enough of a nudge to the local phone and cable providers to enhance their services and lower their prices. Recently, the city found itself needing to upgrade the equipment in order to keep providing Wi-Fi services. Since there were more high-speed internet options available within the city, it decided to discontinue the Wi-Fi service.

Community Attitudes & Usage

Will the community support a municipal broadband network and will the services be used?

Having an identified need for broadband and resources available to provide the services are not necessarily enough reason to initiate a city broadband network. Cities must also consider whether or not the community is in support of this endeavor and whether the community will use the services.

A survey conducted by Pew Internet (Smith, 2010) found that 26 percent of Americans felt that the federal government should not be involved in the expansion of broadband services, and 27 percent felt this should not be a major priority of the federal government. Even though the survey referred to "federal" government, many people view "government" in a collective sense, and these opinions may apply to all levels of government. The Pew report often referred to government in a general sense.

It is also important to consider demographic factors such as age and income and their effect on the use of Internet services. The U.S. Department of Commerce (2010) found that 81 percent of Americans between the ages of 18 to 24 use the Internet at home, while only 46 percent of Americans over the age of 55 use the Internet at home. If a city is considering building a broadband network and the population demographic falls predominantly within the over-55 age group, a city may want to consider a technology education plan to help citizens better utilize the city's broadband investment.

According to the same survey, income was another major factor in Internet use at home. The usage rates start at 29 percent for households with incomes less than $15,000, and progressively

move upwards to almost 89 percent for households with incomes greater than $150,000. If a city can provide affordable services, however, municipal broadband may increase usage among lower-income populations, allowing them the access they desperately need.

Prior to developing municipal broadband networks, several cities in Oregon conducted community surveys. These surveys allowed the cities to determine the needs of the community and gauge the public perception towards a municipal broadband utility. When the public is engaged in the process early and often, they may develop a sense of ownership of the project and may be more supportive of the utility.

Broadband Service Structure

How will the broadband services be structured?

For cities, there are many options for providing broadband services. The examples listed below are only a few of the options available. There may be other service structures that more closely meet the needs and goals of a particular city. Because telecommunications is a constantly changing field, ingenuity and creative thinking can be useful tools.

Free City Service

One broadband service option available to cities is to provide free broadband services, such as a limited-area and/or limited-use Wi-Fi network. For cities that provide free Wi-Fi services, there is no need for an independent city utility. The Wi-Fi network just becomes a provided service under another department, such as Information Technology (IT), or is a contracted service. There may be opportunities for cities to partner with a private provider. More information on cities providing this type of service is detailed on page 23.

City Utility

In a city utility network structure, a city will likely own all or part of the broadband network, and the utility manages this network and any services provided. The utility would have a separate enterprise fund and would be a separate department or division within the city.

With a city utility structure, a city is able to make all decisions regarding the broadband network, including the expansion of the network and the service levels and prices. However, the city is also the sole bearer of the cost of the project and any debt that is incurred. More information on cities providing this type of service is detailed on page 23.

Partnerships

A partnership structure requires a city and at least one additional entity to jointly share resources to build a broadband network. From the case studies in this report, two types of partnerships emerge:

1. Intergovernmental Network: A city partners with other governmental entities to create a broadband network. All specifics regarding the network/utility, including financing and structure, are decided and agreed upon with an intergovernmental agreement. More information on cities providing this type of service is detailed on page 23.

2. Public/Private Partnership: A city enters into a partnership with a private provider. The roles and obligations of each party are agreed upon in contract. More information on cities providing this type of service is detailed on page 23.

A partnership is an excellent way to make a telecom project more cost effective by creating a larger market for services as well as a greater pool for sharing resources (staff, equipment, etc.). However, it may create financial ties between a city and its broadband partner. In these types of projects, it is common to accrue some debt.

In the case of public/private partnerships, there are loans available to cities that are not available to the private provider, so some debt may be solely in a city's name. If the partnership dissolves after the debt is incurred, a city may be placed in a dire financial position, especially if the utility is not operational yet and no revenue is being generated.

In the case of an intergovernmental utility, all governmental entities will likely be financially responsible for the utility and its debt/expenses. Intergovernmental partnerships can also be difficult with two or more community identities trying to move forward with one comprehensive plan. If a city decides to enter into a partnership, make sure there is a clear commitment and understanding of the partnership responsibilities, and preferably a previous history of cooperative ventures.

Type of Broadband Network

What type of broadband network should a city deploy?

Service needs and available funding will likely determine the type of network a city chooses to deploy. The first decision is whether a city wants to develop a wired broadband network, a wireless broadband network, or both.

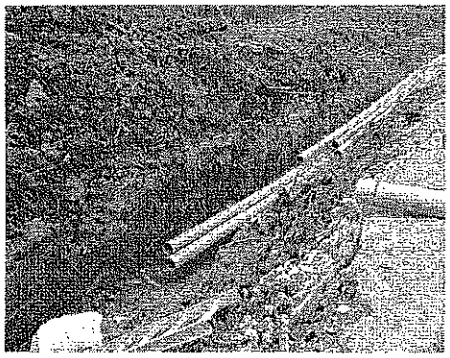
Broadband technology is changing rapidly and the market is competitive. If a city is considering a for-fee broadband utility, a technical consultant can help facilitate good decisions that will better protect a city's long-term investment in a broadband project.

Wired Network

Most private sector providers are moving toward fiber-optic networks for broadband service provision. The term "fiber-to-the-premises" describes the expansion of fiber-optic cable directly to homes and other buildings. Building a fiber-optic network can be costly, especially if a city builds the network all at once. However, a faster build-out means the network is up and running more quickly, allowing a faster return on investment through generated revenue.

According to an Oregon Public Utility Commission report (PUC, 2007), more than half of the broadband connections in Oregon are cable-modem connections provided by local cable company coaxial networks. However, a coaxial cable network may not be the best option for cities currently considering the construction of a new broadband network. Coaxial cables have a high data transmission capacity, but transmit over a shorter distance than fiber-optic cables and can be very costly to install.

Digital subscriber line (DSL) networks are more affordable to deploy than other wired networks. DSL transmits data over local telephone copper wires. In Oregon, approximately one-third of high-speed connections are DSL (PUC, 2007). DSL speeds tend to be slower than fiber networks and in some cases even commercial wireless services (see page 12 for more information on wireless broadband). Since telecommunications is an ever-evolving arena, even DSL and copper lines are undergoing technological change and innovation, and eventually the older copper networks could be revamped to accommodate today's high-speed demands. However, the recent trend in wired broadband seems to be a move toward fiber-optic networks. For example, the city of Sandy's utility, SandyNet, began as a DSL network, but the city is expanding using wireless and fiber-optic networks and eventually plans to phase out the DSL services (see case study, page 25).



If a city decides to build a fiber-optic network, but feels no urgency and does not want to accrue much debt, a network can be developed in stages. Some cities have begun to utilize "joint trenching," where fiber conduits are installed when streets and sidewalks are excavated for water, sewer or street projects. The actual fiber-optic cable can be easily blown, pulled or pushed through installed conduits at a later time.

The city of Sandy recently installed fiber-optic cable in a new water line trench. The city has also used abandoned water lines as conduit for fiber-optic cables. Joint trenching is also an excellent practice even if a network is needed for sole use by the city (e.g. to connect facilities, enhance public safety communication, etc.). Examples of efficient joint-trenching practices are available on the Oregon Utility Notification Center's website (see Resources section, page 45).

In accordance with city development codes or specifications, cities such as Sherwood, require city-owned conduits to be trenched along with other infrastructure in a new development. Therefore, the equipment pieces needed for a broadband network are installed for future use by the city.

Portland's franchise agreements require telecommunications companies to install city-owned conduit while installing the providers' own conduit in the right-of-way. Over time, using this conduit and additional city resources, Portland was able to build a fiber network, IRNE (Integrated Regional Network Enterprise). This network connects many of the city's facilities and is interconnected to Comcast's Institutional Network, which reaches more than 270 regional public facilities throughout Multnomah County, including: the cities of Fairview, Gresham, Portland, Troutdale and Wood Village; Multnomah County; Tri-Met; Metro; schools; and libraries. The IRNE is not being used to provide commercial services.

Wireless Network

Wi-Fi wireless networks represent one of the more affordable options for providing broadband services. Wireless technologies are evolving and the speeds are increasing. A Wi-Fi network is not truly "wireless," however. A typical Wi-Fi network consists of several access points that are

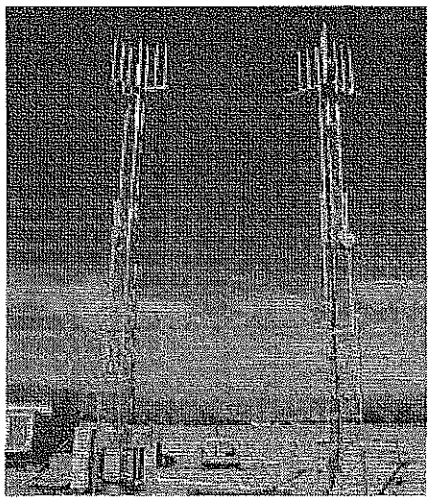
connected to a wireline backbone network. The number of access points needed to cover a city with Wi-Fi access depends on the size of the city and the topographical layout. With this type of network, the speeds can be slower depending the distance between the wireless access points and the fiber/cable connection.

When creating a for-fee wireless broadband utility, cities should conduct a site analysis. It is important to assess the best locations for wireless access points; confirm the wired infrastructure is available to support these access points; and verify the locations will provide competitive high-speed services throughout the city. Even if there is currently little or no competition for service within a city, there may be in the future. Taking the time to develop a utility that provides comparable services to the private providers may help the long-term viability of a utility.

If a city would like to provide free broadband to certain areas, Wi-Fi appears to be the best choice. The equipment is very affordable, and maintenance costs are manageable. The services are free, therefore the efficiency of the wired infrastructure and the placement of the wireless access points is not as crucial. For the city of Tigard, it cost $2,500 to establish a free, limited-area Wi-Fi network, and the ongoing expenses are minimal. Part of what made this project affordable was the strategic placement of access points at city facilities (e.g. city hall) or those of interested parties. By agreement, the city of Tigard mounts a wireless access point on the chamber of commerce building, which then provides free Wi-Fi to all users within the downtown business area (see case study, page 37).

WiMAX is a wireless technology that was released more than 10 years ago, but is currently increasing in popularity. WiMAX provides for a larger coverage area with fewer antennas and is being used to build nationwide 4G networks. WiMAX is even being offered by the wireless provider, CLEAR, in several locations in the Willamette Valley (Portland, Salem, Eugene). In some cases, WiMAX broadband speeds are faster than fiber-optic network services, however the full transmission capacity over a fiber-optic transmission is much greater than wireless. Because the cost of WiMAX equipment is still fairly high, WiMAX may not be a viable option for most cities.

WiMAX Antenna



Another 4G wireless standard that was recently released is Long Term Evolution (LTE). As with all "next generation" telecommunications technology, it boasts faster speeds than the previous generation. LTE is being deployed in Oregon by mobile wireless service providers such as AT&T Wireless and Verizon Wireless.

It is important to consider the advancement in technologies when making decisions regarding city broadband networks. If a city is considering a for-fee service, the utility may need to compete with WiMAX and LTE in the near future. As reported by the Oregon Broadband Advisory Council (2010), CLEAR is charging $25 for its mobile WiMAX wireless services. In comparison, the cost of cable modem services ranges from $27 to $80 per month.

Although watching and waiting may be costly when it comes to economic development, these newer technologies may also be beneficial to cities when the equipment costs decrease and WiMAX and LTE become a more affordable option for the provision of broadband services.

Type of Broadband Provider

What type of broadband provider should a city become?

Once the type of broadband network is selected, cities must determine the type of provider it will be and what services will be provided. Will broadband services be provided free to the public or to paying customers? This decision will affect the answers to subsequent questions based on whether a city needs to generate money to support a for-fee service, or if the city is providing a general service to residents, such as parks and libraries.

Broadband is a general term for high-speed telecommunications networks. Once a building or area is connected to a broadband network, there are other services that can be provided. Within the realm of broadband, there are many players and therefore many roles cities can play as a broadband provider.

Middle Mile Provider (For-Fee Service)

If a city owns and manages a broadband network, it can be a middle mile provider, building the network and leasing network facilities to other entities that provide services directly to the end user (customers).* The intergovernmental broadband network QLife (The Dalles) is an example of a middle mile provider (see case study, page 33).

The "middle mile" choice protects a city from the fiercest part of competition, which is the direct service to the customer. It also helps keep costs down since the city does not need to provide customer service to individual users, only technical support to those leasing space from the network.

Last Mile Provider (For-Fee Service)

In addition, a few Oregon cities are last mile providers, whereby a city utility provides services directly to its customers.* Ashland Fiber Network and MINET (Monmouth-Independence Network) both provide "triple-play" services (voice, video and data) to their local residents (see MINET case study, page 31).

Sandy, which has both DSL and wireless networks, is an Internet service provider, but does not offer voice or video (see case study, page 25). Cascade Locks started a cable utility in 1970 due to a lack of available services, and now also provides data but no voice services.

A utility can choose to be a middle mile provider, last mile provider, or some combination of the two. Sherwood Broadband operates primarily as a middle mile provider. However, in some cases it does lease fiber directly to large businesses. Conversely, Ashland Fiber Network functions mostly as a last mile provider, with a small share of its business related to middle mile network services.

** Note: "Middle mile" and "last mile" provider can have different meanings within the telecom industry.*

It is recommended that cities consult their attorney while considering the type of provider a city will become. There are many legal requirements within the telecommunications business, which may differ depending on the type of provider. For more discussion of the potential legal issues regarding municipal broadband, refer to page 21.

Available Infrastructure

What infrastructure assets does a city already own that can be used to support a broadband network?

One effective cost-saving strategy for cities is to inventory assets that are already available, such as street lights, utility poles, buildings, conduits, etc. City-owned assets are easier and more affordable to access, however arrangements can be made to utilize other public and private sector infrastructure.

City Wired Network

Does a city have any broadband networks connecting its facilities? If so, is the network sufficient enough to provide broadband services at today's fast speeds, or are there ways to affordably upgrade the network? Ashland expanded a 12-mile fiber loop in order to build the complete Ashland Fiber Network. A wired city network could also be used to support a limited-area Wi-Fi network.

Portland's franchise agreements require telecommunications companies to install city-owned conduit while installing the providers' own conduit in the right-of-way. Over time, using this conduit and additional city resources, Portland was able to build a fiber network, IRNE (Integrated Regional Network Enterprise). This network connects many of the city's facilities and is interconnected to Comcast's Institutional Network, which reaches more than 270 regional public facilities throughout Multnomah County, including the following: the cities of Fairview, Gresham, Portland, Troutdale and Wood Village; Multnomah County; Tri-Met; Metro; schools; and libraries. The IRNE is not being used to provide commercial services.

Other Governmental Networks

Do any other governmental entities have their own network? If so, can such a network be utilized in the provision of the city's broadband services in *exchange* for free or discounted services?

Through an intergovernmental agreement, the Lebanon Community School District joined Lebanon's public/private partnership wireless network. The city combined its fiber and wireless infrastructure with the school district's fiber network. This provided the city with more fiber bandwidth for wireless services, and the school district is able to provide wireless services to all school facilities (see case study, page 35).

Private Network

Are there businesses or hospitals in town which have private wired networks connecting facilities? If so, can these private networks be utilized in exchange for free or discounted services?

Though the negotiations can be difficult, some cities have successfully negotiated agreements to lease bandwidth from local phone and cable company networks. If private infrastructure is vital to the delivery of broadband services, cities should consult with private providers before investing in a broadband project.

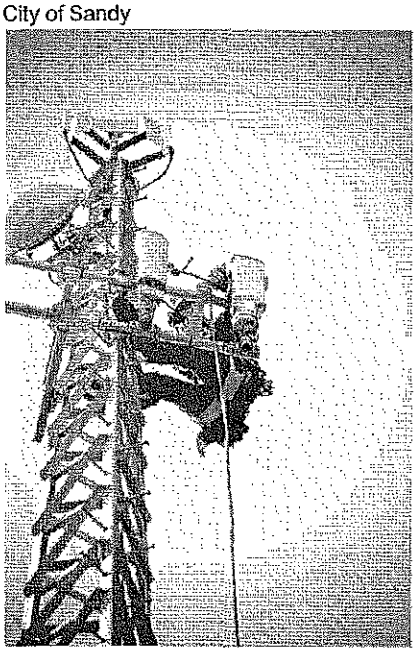
Long Haul Carriers

Are there "long-haul carrier" telecommunications providers that have fiber-optic cable running through a city, but do not provide services to the city? If so, can bandwidth be leased from the carrier's network? Because a long-haul carrier has infrastructure that is not used to provide local services and therefore is not generating revenue, this could be a mutually-beneficial arrangement for both parties. In some cases, the carrier may actually be paying a city franchise fee for the use of the right-of-way. More information on right-of-way franchises is available in the League of Oregon Cities' Telecommunications Tool Kit (see Resources section, page 45).

Street Lights and Utility Poles

Do cities own street lights or other utility poles that can be used to mount wireless access points across the city? Sandy owns most of the city street lights, which offers many site options for wireless access points (see case study, page 25).

City of Sandy



Some cities have successfully negotiated arrangements to mount wireless access points on private electric utility poles. Again, negotiations with private utilities can be difficult, so cities should talk with the local electric provider to see if an arrangement is feasible before moving forward with a broadband project.

Buildings and Towers

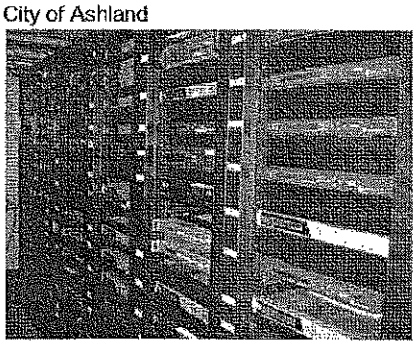
Are there city facilities, water towers or other facilities near the targeted area that could be used to install wireless access points? If a city is providing complimentary services, it may be best to minimize the up-front and ongoing costs. Cities could also use the building or tower of another entity under an agreement that is beneficial to both parties.

As mentioned earlier, the city of Tigard mounted wireless access points on city hall and parks facilities. The city also mounted an access point on the chamber of commerce building, which provides free Wi-Fi to all users within the downtown business area (see case study, page 37).

Other City Resources

As a city moves forward with a broadband project, it is important to consider all resources available to the city and assess how these resources can be used to support a new broadband service. For example, is there IT equipment that can be used to support or back up the

City of Ashland



broadband service equipment? Can electric utility bucket trucks be used to repair wireless access points? Creativity and ingenuity are crucial to the successful provision of public services.

Funding Options

How will a city pay for a municipal broadband network?

The financial resources needed to develop a broadband network depend on the size and type of network. The cities that built smaller networks did so with little or no debt, and ongoing costs are minimal. The city of Tigard spent $2,500 for the equipment needed to start up its free, limited area Wi-Fi network, and the ongoing cost is only about $145 per month (see case study, page 37).

The cities that have deployed fiber-optic loops and/or fiber-to-the-premise networks were able to fund these projects using various revenue sources. For more details on the costs for this type of project, see the case studies on page 23.

Loans and Other Debt

Many of the cities providing broadband services incurred debt in order to fund the project. Even if the utility does accrue debt, effective financial planning and an efficient business model can make the debt manageable. However, debt may also bring public scrutiny upon a newly-formed broadband utility.

MINET (an intergovernmental utility between the cities of Monmouth and Independence) obtained several smaller loans at the beginning of the project and then additional loans as funding was needed for expansion. However, in hindsight a better financial option would have been to acquire one larger loan and return any unused funds. Fortunately, the two cities were able to refinance MINET's debt with a full faith and credit bond. Currently MINET is facing an annual shortfall of about $600,000, but revenues are increasing; MINET projects it will be in the black within two years (see case study, page 31).

Grant Funding

Several cities have also used grants to help fund their broadband projects. The Oregon Business Development Department (OBDD) website contains information regarding state and federal grant funding for broadband projects. Even though grant funding through OBDD has not increased in recent years, some projects may be eligible for funding through the Special Public Works Fund.

Federal broadband grants were awarded through the American Recovery and Reinvestment Act. As reported by the Oregon Broadband Advisory Council (2010), more than $52 million was extended to Oregon-based broadband projects. See page 25 for more information on the city of Sandy and the other Oregon local government broadband projects that received ARRA funding. More federal funding is expected since broadband expansion is a federal priority.

General Fund Support

For most municipal broadband utilities, general fund revenues are not used to support broadband services. Instead, cities rely on subscriber revenue. In order to quell some public concern over the financing of a public broadband utility, the city of The Dalles and Wasco County promised there would be no ongoing general fund support (see case study, page 33).

Some municipal broadband projects did receive initial funding from the city general fund, and a few received general fund loans for smaller expansion projects. For example, Sherwood Broadband has received two general fund transfers, but the utility will repay these loans along with any other debt.

The discussion on financing should extend beyond the initial cost of building a network. Long-range financial planning is essential in order to ensure the viability of a municipal broadband service.

Maintenance & Operations

How will a city maintain and manage its broadband service?

Providing broadband services is more than just building the infrastructure or purchasing equipment. Cities must plan for the resources needed to maintain and manage broadband networks and services. This also applies to cities only providing a limited area Wi-Fi service.


City of Ashland

For the broadband cities in Oregon, administrative options for maintenance and operations include the use of in-house staff and volunteers, contracted services, or a combination of the two.

City Staff & Volunteers

If a city would like to handle maintenance and operations in-house, the level of service provided may dictate how much staff time is needed. Some of the municipal broadband networks have city staff assigned to the utility. Sherwood Broadband has two primary staff and two support staff. All these employees have other duties in the city's information technology department, but part of their work responsibility includes the maintenance of the Sherwood Broadband network. Time spent on Sherwood Broadband by these four staff members is equivalent to a half-time employee.

If cities are only providing a free Wi-Fi service, it is best if there is already staff available who have the time and skill to maintain the equipment. It is not cost-effective to hire new staff to maintain a free service. A city could also consider a contract for the provision of Wi-Fi services to the public (see Contract Services/Equipment section below).

Another cost-saving option is to use volunteers. A councilor in Yachats who was helping the city install a weather station at the treatment plant also suggested the city use this new infrastructure to provide free Wi-Fi services downtown. The councilor is now in charge of network maintenance, which requires minimal time. There may be other volunteer partnership opportunities such as students in need of work experience or business owners hoping to reach out to the community.

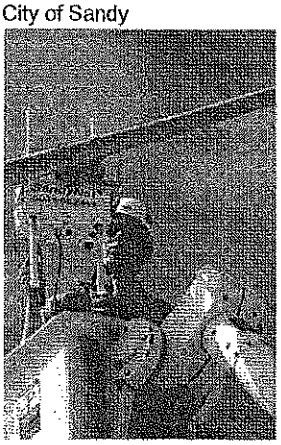
It is important to note that current staff may have expertise in one area needed for the provision of broadband services, but not in another. For example, the information technology department can manage the servers and other IT equipment, but may not be able to handle the electrical work needed to repair a wireless access point.

Contract Services/Equipment

Several cities utilize contract services as a cost-effective method of providing broadband services. QLife is an intergovernmental utility that has no direct QLife employees. All of the work is contracted out, including the management of the utility by The Dalles' city manager (see case study, page 33).

Coos Bay chose to contract with a local telecom company for the provision of free Wi-Fi services to several locations around the city, including the downtown area and the library. The monthly cost of the service contract is affordable, although the city did have to purchase the needed start-up equipment (see case study, page 38).

City of Sandy



The city of Sandy has two general information technology staff members who provide network support to SandyNet. However, for the Wi-Fi services, the city leases its Wi-Fi equipment and is not responsible for equipment maintenance or repair. At the end of the lease the city can either purchase the equipment or upgrade to new equipment under a new lease (see case study, page 25).

As previously mentioned, Sherwood has four staff members supporting Sherwood Broadband which is the equivalent of a half-time employee. In addition, the city has a contract with an on-call network contractor who can respond to outages or other network issues that arise when city staff are not available (see case study, page 27).

Staying Competitive

If a city builds a state-of-the-art network now, can the city stay competitive in the future?

Competition requires multiple providers to offer more services at a lower price. If a city chooses to provide broadband services, its services must compete with other providers, including mega-corporations of the telecommunications industry.

Telecommunications is a rapidly changing industry, where private providers have the benefit of being "for-profit." When major upgrades are needed to stay competitive, private providers have

more financial resources available and have access to newer technologies such as LTE. Private providers can target service areas they know are profitable, whereas the role of a city is not to make a profit, but to provide essential services to the community in the most cost-effective manner. Creating more broadband service competition can be a community benefit, but if a city cannot continue to compete with private sector services or prices, it may be difficult for the broadband utility to thrive.

The city of Cascade Locks has been running a cable utility since 1970. As satellite TV began to penetrate the market, the city began losing cable customers. The city made some upgrades to the network and then introduced its data service, which has helped customer retention. At that time, the city's broadband network was the premier service in town. Currently, some of the private providers have surpassed the city's service levels and the city is not in the financial position to make additional upgrades.

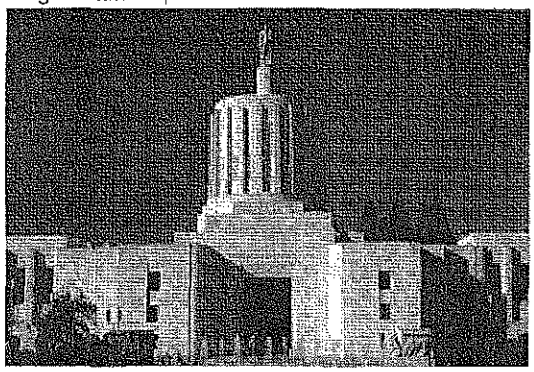
Furthermore, while city broadband services are subject to laws affecting private telecom and cable providers, cities are subject to additional laws as a governmental entity. This could put cities at a competitive disadvantage. For example, the voters in Cascade Locks approved a charter amendment requiring voter approval for city fee increases. The city's cable and data service rates are included in this requirement. As cable programming prices increase, the city is not able to increase its cable rates without voter approval and now loses more than $2 per HBO account. Fortunately, Cascade Locks' utility is well established, has no debt, and is not facing a fiercely competitive market. Even though the city is seeing a decline in revenues, the broadband service it provides is more affordable than most other providers and therefore is seen as a valued service to many citizens.

Political Opposition

Cities moving forward with a municipal broadband network could face political opposition from private providers. The goal of the opposition is to prevent and/or abolish city broadband utilities, and its efforts range from the threat of counter action to actual legislative and legal efforts. The Community Broadband Networks website provides information on state preemptions as well as opposition to specific municipal broadband networks (see Resources section, page 45).

Local Preemption

Oregon State Capitol



At the federal level, telecommunications industry lobbyists and politicians have made efforts to pass legislation that would prohibit local government authority to provide broadband services. While these efforts have not been successful, several states have passed preemptions on local government broadband services.

Currently in Oregon there are no state preemptions on municipal broadband services. However, there have been unsuccessful legislative efforts to prohibit or limit local government authority. Authorities in telecommunications law and politics

warn local governments that similar attempts could be made in the future. Cities that are considering a municipal broadband service, or that currently have one, should closely monitor both federal and state legislative efforts.

Local Opposition

In 2001, The Dalles and its broadband partners experienced political opposition as the QLife network proposal developed. Originally, the partnership was going to include the city, county, the port and the local People's Utility District (PUD). As the partnership progressed, the local telecom provider launched a campaign against the proposed broadband network and a lawsuit was filed against the PUD. Eventually the port and the PUD bowed out of the partnership; however, the city and the county moved forward. In response to the negative campaign launched against the proposed broadband network, the city and county changed the model and promised no ongoing public subsidies would be paid to the network.

As reported on the Community Broadband Networks website, other cities around the country have faced similar opposition to their municipal broadband networks. Recently, two cities in Minnesota, Silver Bay and Two Harbors, received letters from the local telecom provider stating that the company disagreed with a claim made in the city intergovernmental agreement. The company asserted that the agreement claimed the municipal broadband network was necessary because there were no other broadband providers in the area. The letter noted that this false claim was a legal liability to the revenue bonds and other funding the cities had received. In actuality, the telecom provider had not read the final revision of the agreement, and furthermore any claim that there were no other providers was not a condition of the funding sources. However, misinformation can be politically damaging when working with a constituency that may be cautious about a public broadband network.

Legal Authority, Restrictions & Requirements

If a city chooses to pursue a municipal broadband network, several legal issues must be considered. Due to the unique nature of telecommunications, the following information is not a complete list of legal issues and cities should consult their attorney when pursuing a municipal broadband project.

Authority & Local Restrictions

Oregon is a home rule state, giving cities broad authority to act according to the language in their charters, unless federal or state law preempts local authority. Currently there are no laws restricting the ability of cities to provide broadband services in Oregon. However, there have been efforts at both the state and federal levels to restrict this authority.

Most Oregon cities have adopted home rule charters with "broad" powers that would allow the city to provide broadband services as long as there is no specific restriction in the charter. To confirm a city's authority to provide broadband, a city must first have its charter reviewed by legal counsel.

In addition to city charters, there may be other local restrictions affecting the ability of cities to create broadband networks. Therefore, it is important for cities to take inventory of any additional local restrictions such as pole attachment agreements, franchise agreements, bond restrictions, ordinances, resolutions and/or contracts. These restrictions could be implicit or explicit, and these documents should be reviewed by legal counsel.

Charters, ordinances and other legal documents could also limit how cities operate and manage their broadband services. For example, if a city's charter contains a voter approval provision for any utility rate increase, a city should analyze the impact of this type of charter provision on the broadband services that the city may provide.

Despite the fact that most Oregon cities retain authority to provide municipal broadband services, there are, of course, other legal issues that a city should keep in mind when considering a municipal broadband network.

The Communications Assistance for Law Enforcement Act

The Communications Assistance for Law Enforcement Act (CALEA) requires telecommunications carriers and equipment manufacturers to modify and design equipment, facilities and services to ensure that built-in surveillance capabilities allow law enforcement and federal agencies to monitor all telephone, Internet (including emails) and VoIP traffic in real-time.

CALEA became effective in 1995, thus new commercial systems that a city might purchase should be CALEA compliant. A city providing broadband services will need to make sure that it complies with any other CALEA requirements. A city could contract with a third party that provides data to law enforcement agencies in the required format.

The Federal Communications Commission (FCC) has interpreted CALEA to include broadband providers not offering voice services. Thus, an Internet-only provider would be subject to CALEA. The CALEA requirements may shape the decisions a city makes in regards to broadband services, so for more information on CALEA see the Resources section on page 45.

Risk Management

The different business models demonstrated in this report may subject cities to a broad range of liabilities (see page 10 for more information on the different types of service models). Therefore, it is appropriate to consider not only the cost benefits of the different service models, but also the potential risks. Furthermore, grant or loan funding could also result in various financial and legal requirements which a city is then obligated to fulfill.

Another risk management consideration could be related to the type of services that a city provides. For example, if a city provides free Wi-Fi, it may want to adopt terms of use and privacy policies. These policies should establish that a city is not responsible for issues related to lost data or interrupted service. Additionally, city policies should establish that free Wi-Fi may only be used for legal, personal activities and are not for resale to another party. These types of policies can prevent claims against cities or be used to defend cities should such claims

arise. However, such a policy could have free speech implications, so legal consultation is recommended.

Oregon Municipal Broadband – Case Studies

In today's digital society, high-speed broadband services are vital to local economic development and are in high demand with the general public and business community. The main purpose of a city is to provide essential services to a community. Due to insufficient services provided by private utilities, some cities have classified broadband as "essential" and have chosen to add broadband to the list of city services.

The following section examines several Oregon cities that provide broadband services. These case studies highlight the various roles and business models discussed in this report. They focus on cities that have led the way in municipal broadband; however, cities must still consider all of the policy and legal questions and determine what role they should play in the provision of broadband services.

This report only provides a general overview for the following Oregon municipal broadband networks and services. Additional information on any of the case study cities can be obtained by contacting the League of Oregon Cities.

City Utilities

- City of Sandy: city-owned broadband network (DSL, Wi-Fi, and fiber) (page 25)
- City of Sherwood: city-owned fiber-optic broadband network (page 27)
- City of Cottage Grove: city-owned fiber-optic network; public/private partnership for free and for-fee wireless services (page 29)

Intergovernmental Partnerships

- Cities of Monmouth & Independence: partnership for a fiber-optic broadband network (page 31)
- City of The Dalles: partnership for a fiber-optic broadband network (page 33)

Public/Private Partnerships

- City of Lebanon & Peak Internet: Partnership for free and for-fee wireless services (page 35)
- See Also: city of Cottage Grove (under city utilities - page 29)

Free City Wi-Fi Services

- City of Tigard: city provides free Wi-Fi at certain city facilities and parks (page 37)
- City of Coos Bay: city contracts with private provider for free Wi-Fi at certain locations (page 38)
- Other City Wi-Fi Networks (page 38)

EXHIBIT E

Other Broadband Projects

- Other Local Government Networks (page 39)

City of Sandy

City Broadband Services
Network Type: DSL, Wireless & Fiber Networks
Service Type: Internet Service Provider
City Role: City Broadband Utility
Coverage: Citywide
Start Date: 2003

Needs Assessment & Planning

In 2001, the only Internet option for the city of Sandy was dial-up, even though the need and desire for faster services existed.

The city decided to take the initiative in solving its broadband issues by hiring a consultant to analyze the options for a city broadband utility. The consultant recommended a digital subscriber line (DSL) network as a simple, cost-effective method to deploy high-speed Internet services. Despite the fact that DSL has historically been a slower service than cable modem Internet, the belief was that these speeds would be a substantial improvement over dial-up Internet, and sufficient for local residents and small/home-based businesses. As plans moved forward, the public perception of a municipal broadband utility was very positive.

Implementation & Administration

Later in 2001, the city council approved an ordinance establishing SandyNet, a municipal broadband utility which operates under its own enterprise fund. Despite having the option to provide voice, video and data, Sandy chose to only provide data services to its customers.

The city council also created a SandyNet Advisory Board to assist the city on decisions regarding broadband services. This board is appointed by the council and consists of members of the public, including some local business owners.

It only cost the city $150,000 to activate the major parts of the city with DSL services. Although the technology is fairly simple, the city found it difficult to coordinate with the local phone company regarding the city's use of the private network. The company was legally bound to respond, but there were no requirements on compliance deadlines.

At that time, DSL was an effective and affordable method for bringing high-speed Internet services to the city of Sandy. The utility's business model is to expand the network when a demand is demonstrated and there is subscriber revenue available to fund the expansion. This successful business model resulted in SandyNet being debt free within six years, and the utility continues to be financially stable. There are no ongoing general fund contributions to the SandyNet enterprise fund.

Even though DSL was the initial service provided by SandyNet, most of the network's recent expansions have been made using Wi-Fi technology. Wi-Fi is affordable to deploy and can provide faster speeds than other wired broadband services, including DSL. Currently, the city's Wi-Fi download speeds are approximately 10 megabits per second (Mbps), which is comparable to cable Internet speeds.

The topographic layout of Sandy makes it difficult to deploy Wi-Fi citywide, so DSL is still available through SandyNet. The city hopes that in the next few years Wi-Fi technology will advance, allowing Wi-Fi coverage for all areas and a full phase out of the DSL service.

SandyNet has laid fiber within the main business core and is currently studying the feasibility of expanding a fiber network to new subdivisions.

In order to provide the "middle mile" connection to the Internet, the city leases space on the local cable provider's fiber network. In the future, this connection will be provided through a federally-funded county fiber-ring (See Clackamas County case study on page 39).

The city leases the Wi-Fi equipment. At the end of the lease the city either owns the equipment or can acquire the latest devices through a new lease. Under the lease, the city is not responsible for the maintenance, repair or replacement of the equipment. The city has found this to be a cost-effective approach to equipment management. Most of the Wi-Fi access points are mounted on city-owned street lights, with a few located on roof tops and towers.

For utility operations, there are no staff members exclusively designated to SandyNet. Two staff members provide support to SandyNet, but they also serve as the city's general information technology (IT) department.

Results & Benefits

In the last few years, cable modem Internet was introduced to Sandy residents, however many customers are still satisfied with the Wi-Fi and DSL services provided by the city. SandyNet's rates are $19.95 per month for residential services of 10 Mbps download speeds, and $175 per month for commercial fiber services with speeds up to 80 Mbps. There are approximately 600 SandyNet customers, equal to 20 percent of the local market.

SandyNet has been a successful economic development tool for the city. Its services support a local business which writes technical manuals for corporate aircraft. This business needs to upload and download large documents, and the city's fiber-optic services have met this need.

Furthermore, the city expanded its network outside of the city and up to the Resort at the Mountain. This expansion allowed the resort to recruit more high-tech conferences. The success of the resort means more jobs for Sandy-area residents and more tourists visiting Sandy stores and restaurants.

The city initially created SandyNet to bring higher speed Internet services to residents and businesses, however the city has also found many cost-effective uses for government business. The city uses the Wi-Fi network for police department e-ticketing, security cameras at city parks, and "smart" water meter reading. With the SandyNet fiber connecting all city facilities, the city was able to switch to VoIP telephone services, saving approximately $1,500 per month.

Since SandyNet began, the city council has been faced with many decisions about the future direction of the utility. The city always uses these opportunities to evaluate the utility and the services it provides. The city of Sandy received a $750,000 United States Department of Agriculture (USDA) stimulus grant to expand wireless Internet to the rural areas surrounding the city. To this day, the public perception of SandyNet is still very positive, and the community is supportive of the city's efforts to expand its Wi-Fi and fiber network.

City of Sherwood

City Broadband Services
Network Type: City-Owned Fiber Network (Limited Area Wireless Network)
Service Type: Middle/Last Mile Provider (Wi-Fi Services)
City Role: City Broadband Utility
Coverage: City of Sherwood & Neighboring City
Start Date: 2005

Needs Assessment & Planning

In 2000, Sherwood was experiencing rapid growth, mostly through residential development. The only broadband service provided was the phone company's DSL service, which at the time met the need of most residential users, but was not ideal for business recruitment. By 2001, the city of Sherwood decided it needed to develop a fiber-optic broadband network in order to facilitate more business growth. After extensive discussion and the completion of feasibility studies, the city council, acting as the urban renewal agency board, approved a resolution authorizing $300,000 to create the city utility Sherwood Broadband.

Implementation & Administration

Of the initial $300,000 expenditure, $250,000 was used to connect Sherwood to a large fiber network in downtown Portland. The remaining $50,000 was spent on capital equipment.

In 2004, Sherwood began laying fiber all around the city. Since the primary focus of the project was business development, the city started construction in the downtown area, and this portion of the project was funded by the urban renewal district. The city then continued the expansion, bringing fiber-to-the-premise citywide. In 2005, the city decided to expand the network outside of city boundaries into the neighboring city of Newberg. This decision to expand the network paid off, and several of the utility's biggest customers are currently located in Newberg.

Sherwood Broadband is generally a "middle mile" provider, meaning the utility owns and manages the network but leases network space to other vendors, who in turn provide services directly to the customer. A few larger companies lease fiber for their own use.

In order to fund the construction and expansion of the Sherwood Broadband Network, the city accrued approximately $1.25 million in debt. Sherwood Broadband is revenue positive, and the city has a plan to repay this financial obligation. To help keep operational costs down and eliminate the need for additional debt, the current business plan is for no further expansions of the network outside of the city, to expand only with new development, and to maintain the existing network. However, the city can deviate from this business model with city council approval.

For operations and administration, the city of Sherwood has four employees in the information technology department whose job descriptions include assistance to Sherwood Broadband. The staff time spent maintaining Sherwood Broadband equates to approximately one half-time employee. In the case of outages, which only occur a few times a year, if at all, one of the city staff responds to the incident. If city staff is not available, an on-call network contractor responds. If there are no outages or major network repairs needed, ongoing maintenance of the broadband utility is approximately $50,000 to $60,000 per year.

Around the same time Sherwood Broadband launched its network, the local cable company decided to deploy their broadband service. Because the city is not providing services directly to the customer, there is no direct competition between the city and the cable company. However, there is now one more service option for local businesses and residents.

Results & Benefits

Just when the broadband utility had hit full momentum, the current economic recession set in and at least one prospective business that was considering locating to Sherwood put their expansion plans on hold. However, the city is still confident that as the economy recovers, Sherwood Broadband will play a vital role in the city's economic development efforts.

Having a city-owned broadband network has also allowed Sherwood to provide other benefits to the community. For instance, all the school facilities are now connected to Sherwood Broadband. The school district covered a small portion of the expenses needed to connect all the schools, and there is now an improved communication network between school facilities.

In addition, Sherwood's broadband network allows the city to provide free Wi-Fi services at 10 locations around the city. Because the city owns the wired network and does not need to lease network space from a private provider, the cost to provide these free Wi-Fi services is minimal. The Wi-Fi hotspots are located in areas such as downtown (on city facilities such as city hall), the YMCA, senior center, a major park, the public works facility, and the police department. The city is hoping to eventually provide free Wi-Fi at all the city parks.

Negative public feedback was minimal when the utility was first being discussed. The public is still satisfied with the benefits Sherwood Broadband has provided to the community, including more competition, leading to a better choice of services at a more affordable price. Sherwood Broadband is considered an essential service to the community, just like any other service or infrastructure. With the utility in a sound financial position and the adoption of a conservative business plan, Sherwood Broadband should continue to be successful, and the community will continue to see the rewards.

City of Cottage Grove

City Broadband Services

Network Type: Fiber Network; Wireless Network

Service Type: Fiber services to key institutions; Public Wi-Fi services.

City Role: City manages the fiber-optic network; Partnership with an ISP to provide free and subscription Wi-Fi services.

Coverage: 1 fiber loop and 80% Wi-Fi coverage in Cottage Grove; 1 fiber loop in Creswell.

Start Date: 2008

Needs Assessment & Planning

In 2005, there was no cable Internet service and limited DSL services within the city of Cottage Grove, which left the schools and other key stakeholders with few options for a vital service.

The Cottage Grove City Council set a goal to connect local schools to a high-speed fiber network. Since the private providers had no interest in offering this service, the city considered a municipal broadband network.

Implementation & Administration

The city leased two strands of fiber-optic cable from the Regional Fiber Consortium, an ORS 190 organization which includes cities, counties and other public entities. The city's fiber backbone starts in Eugene, runs through Creswell and ends in Cottage Grove. To connect schools, city hall, and other government agencies, the city built a complete fiber loop and a second fiber line (partial loop) in Cottage Grove. The city also built a fiber line (partial loop) in nearby Creswell, which connects key institutions such as schools and city hall.

The cost to construct this broadband network was approximately $2.5 million. The South Lane School District and the Lane Education Service District made a combined contribution of $300,000. At that time, the ruling in *Qwest Corp. v. City of Portland* was being appealed and the city was saving its Qwest franchise fees and settlement payments in case a subsequent ruling required the city to return the funds. When the decision was finalized, the city had roughly $700,000 to help fund the broadband project. Additional funds were secured through a bank loan. To prevent future debt, the city plans to expand the network and related services only when the funds are available.

As the fiber-optic network was launched, it became clear to the city that there was a need and demand for residential broadband services. However, the newly-built fiber-optic loop did not bring fiber-to-the-premise, so the city decided to utilize Wi-Fi as an affordable means to cover the city with faster services.

The city entered into a $500,000 lease/purchase agreement for more than 100 radios, and has placed most of them in locations that cover 80 percent of the city. In partnership with the local Internet service provider OIP Earthclick, the city is providing free and subscription Wi-Fi services. The city purchases the equipment while OIP handles the maintenance and customer service. The city has several Wi-Fi service tiers, starting with 10 hours of free Internet at 128 Kilobits per second (Kbps) upload and download speeds. The top service tier is $50 for unlimited time and unlimited speed (over 7 Mbps). Currently the city has 800 subscribers, including 250 paying customers.

Results & Benefits

Through this broadband project, the city of Cottage Grove met its goal of connecting all area schools to high-speed broadband services. Before the South Lane School District (SLSD) was connected to the city's fiber network, the district was using a 10 Mbps network connection to conduct business with the Lane Education Service District (ESD) in Eugene. With the city's network, SLSD is currently utilizing a 1 gigabit per second (1,000 Mbps) connection to the ESD. The nine schools within SLSD are connected through a 1.5 Mbps, district use-only network. Six of the school facilities are even benefiting from 1 Gbps connection speeds between schools. The schools are also able to have direct phone access to each classroom, a significant benefit to classroom safety. The affordability and efficient connectivity of the city's fiber network has provided a needed benefit to the local school district.

Schools and residents in the city of Creswell are also benefiting from the fiber network built by Cottage Grove. The school facilities in Creswell, including the district office, middle school and high school, are also connected to Lane ESD with faster speeds. Furthermore, the city of Cottage Grove was able to lease dark fiber and rack space to the local incumbent telecommunications provider in Creswell. This arrangement will hopefully bring more opportunities for faster, affordable telecommunications services to Creswell citywide.

The city plans to install a third broadband fiber loop in Cottage Grove which would pass by several major businesses, as well as extend the network out to the hospital and wastewater treatment facility. One local business, which primarily conducts sales by phone and the Internet, is very interested in this third loop which would connect two of the business's local facilities.

The demand for Wi-Fi services also illustrates a need for residential broadband services. Though the city's Wi-Fi services cover most of the city, many of the residents that are not currently in the city's coverage area are eager to see the city expand this service.

As funds become available, the city is hoping to expand the fiber-optic network and Wi-Fi services. However, the city also hopes that other Internet service providers will lease space off of the fiber network, thereby creating more service options for local residents and providing revenue sources for the city broadband network.

Cities of Monmouth and Independence

City Broadband Services
Network Type: Intergovernmental Fiber Network
Service Type: "Triple-Play" voice, video & data
City Role: Intergovernmental Partners
Coverage: Citywide (both cities)
Start Date: 2006

Needs Assessment & Planning

In 1999, the cities of Monmouth and Independence asked their local cable company when high-speed Internet would be introduced to the cities. The cities were told services would be available no sooner than 2020. With the new millennium approaching, both cities realized that to be economically viable, high-speed Internet services were desperately needed.

Accordingly, the two cities conducted a feasibility study regarding an intergovernmental broadband network. This study also included a public survey, which showed that the citizens of Monmouth and Independence were receptive to the idea of a municipal broadband utility. Furthermore, a major client was eager to receive better telecommunications services, Western Oregon University. These and other factors illustrated to the two city councils that a municipal broadband utility was a viable and necessary project.

Implementation & Administration

In 2002, MINET (Monmouth-Independence Network) was created and in 2004 the two cities approved an ORS 190 intergovernmental agreement, establishing that MINET would be governed by a six-member board of directors, including the city manager, a councilor and a citizen from each city. MINET is now a licensed Competitive Local Exchange Carrier (CLEC) under the Oregon Public Utilities Commission (PUC) and can operate statewide. However, the network is currently operating only within the Monmouth/Independence city limits.

The first phase of the project was to build the primary fiber loops in Monmouth and Independence. Phase two, full fiber-to-the premise in both cities, was completed in 2006. MINET began providing broadband services to customers later that year.

The cost for phase one (primary loops within both cities), was approximately $1.45 million. From 2005 to 2008, MINET took out an additional loan of $27 million for the fiber-to-the-premise expansion.

MINET obtained several smaller loans at the beginning of the project and then additional loans as funding was needed for expansion. However, in hindsight a better financial option would have been to acquire one larger loan and return any unused funds. Fortunately, the two cities were able to refinance $17 million of MINET's debt with a full faith and credit bond. Currently MINET is facing an annual shortfall of about $600,000, but with each passing year the utility sees increasing revenues. MINET projects it will be in the black within two years. Since MINET has already brought fiber-to-the-premise throughout both cities, the only network expansion that is expected is for new development, which is considerably less expensive to install than in developed areas.

MINET spends little revenue on marketing, though it actively promotes services through advertisements on the MINET video service, the local newspaper and city utility billing flyers. Occasionally the utility does embark on a door-to-door campaign. Despite the nominal revenue spent on marketing, the utility's subscriber revenue has been growing at a healthy pace over the last three years. MINET holds a 46 percent penetration rate in the local market, and expects it to rise to 60 percent by 2014.

The utility's Internet services run from download speeds of 5 megabits per second (Mbps) to 100 Mbps. The basic Internet package price to a residential user is $30 per month and offers 5 Mbps download and 1.5 Mbps uploads speeds. MINET monitors network traffic and service speeds to ensure that customers receive the advertised speeds. In comparison, Qwest's DSL services run $40 a month for up to 7 Mbps download and 768 kilobits per second (Kbps) upload, though services could be slower depending on location and customer traffic.

MINET's basic "triple-play" package (voice, video and data) costs $94 per month and includes the basic Internet package, 100 video channels, and basic telephone services (e.g. local and long-distance calls).

Results & Benefits

The goals of the MINET utility are:
1) To provide affordable, state-of-the-art broadband services;
2) To be an economic development partner and help recruit businesses by offering creative, customized service solutions; and
3) To be financially stable, with debt service and operation costs being paid exclusively from subscriber revenue.

Among the major successes for MINET has been the utility's ability to provide excellent service with a small staff due to a network of highly automated systems for network management and billing. MINET works diligently to ensure that they provide cutting-edge services at competitive speeds and prices.

MINET has also been successful as a partner with businesses. Western Oregon University has been very pleased with the cost and level of services it receives through MINET. This service has also made Monmouth and Independence an attractive location for telecommuters. MINET also showed its ingenuity in business service solutions by creating a state-of-the-art, redundant broadband service package for the new Independence City Hall that is both highly efficient and cost effective for the city.

Finally, the utility is on the right track for financial stability. With subscriber revenue climbing at a healthy pace, the utility projects to be in the black within two years. MINET does not envision any regular general fund contributions from either city.

As an intergovernmental utility, MINET is an important public service to the community. It provides support to the local PEG channel and gives free advertising space to local businesses within the utility's billing notices. It also helps local businesses create TV advertisements, which run on the MINET video service. The utility has exceeded the expectations of the two cities and will continue to be a vital service provided by the partnership of Monmouth and Independence.

City of The Dalles

City Broadband Services

Network Type: Fiber Network

Service Type: Middle Mile Provider

City Role: Intergovernmental Partner with Wasco County

Coverage: 17-mile loop around most of the city

Start Date: 2004

Needs Assessment & Planning

In 2001, The Dalles was in need of affordable high-speed broadband services. The local provider told the city it would be 5 to 10 years before broadband services would be available within city limits. During this time, a business that was considering locating to The Dalles decided to locate in another city because of the affordability and speed of available broadband services.

Meanwhile, local schools and the community college were also in need of more broadband service options. The Dalles needed urban broadband services at urban prices, and they needed it right away. In an effort to meet these needs, a partnership was formed between the city of The Dalles, Wasco County, the port of The Dalles and the local People's Utility District (PUD). The goal was to create a broadband network to provide affordable, high-speed broadband services to local agencies (such as schools, colleges and the regional hospital) and to recruit businesses.

As the partnership progressed, a local telecom provider launched a campaign against the proposed broadband network. After a lawsuit was filed against the PUD, the port and the PUD bowed out of the partnership. However, the city and the county moved forward, changing the model in response to the negative campaign. In the new model, phases of the project were built only after subscriber revenue could cover the monthly cost of any loan payments incurred. This allowed the city and county to promise that no ongoing public subsidies would be paid to the network. The new model alleviated enough public concern that in 2002 the city and county were able to begin building the fiber-optic broadband network. The final construction phase ended in 2003, and the end result was the QLife Network, a 17-mile fiber loop intergovernmental broadband utility.

Implementation & Administration

The QLife Broadband Network was officially created by an intergovernmental agreement between the city of The Dalles and Wasco County. The utility is governed by a board of directors appointed by the city and county. The utility is managed and supported by the city through a contractual agreement. In fact, the QLife network is a 100 percent contract entity that has no direct QLife employees. In addition to a contract with the city, there are two contracts with Internet providers for network management. There are also contracts for an attorney, engineer services, and plant management and maintenance. Contract GIS services are provided by the county.

QLife is a middle mile provider that leases space on the fiber network to other vendors who offer commercial broadband services directly to the customer. The only "end-users" who use the network directly are local government agencies (city, county, schools and community college).

Approximately 50 percent of the initial funding for the QLife Network consisted of federal and state grants, while 50 percent came from loans with a one-time public subsidy of $10,000. The

total cost for the 17-mile fiber loop was $1.8 million. QLife expects this debt to be paid off by June 2018. As promised, there have been no public subsidies from either the city or the county.

A major success of QLife has been the utility's revenue model. The utility does not expand services unless there is revenue to cover expenses – both for construction and ongoing maintenance. The utility does not build out to a new area unless a need or interest is demonstrated. QLife also works to complement existing services from private providers rather than compete with them.

QLife earns about $500,000 per year. Approximately $180,000 is applied towards system operations, $190,000 is used to retire the accumulated debt, and the remaining revenue is used at the board's discretion for reserves, contingencies or projects identified as best for the network or the community.

QLife did face a potential financial setback when a private partner went bankrupt and left the city with an $800,000 loan. Fortunately, the company reorganized and agreed to a payment arrangement with QLife. Both entities use a portion of their revenue to pay off the loan. The company's revenue comes from the services they provide using the QLife network, and QLife uses the revenue from the company's lease. Had this provider been unwilling to cooperate, Qlife would have faced a huge setback in its financial debt repayment plan.

Results & Benefits

QLife has been a tremendous economic development tool. In 2005, a shovel-ready site, affordable electricity and the QLife Network services helped attract Google, which located a new facility in The Dalles and created 150 new local jobs within one year.

In addition, QLife has experienced some unexpected revenues. There is a QLife facility in city hall which houses the QLife Network equipment and servers. Other providers lease space from this rack to house their equipment, and the resulting revenue makes up one third of QLife's annual total.

The local cable provider eventually introduced its broadband service to the area, but QLife has allowed other providers to enter the market, thereby increasing the level of service and decreasing the cost through competition. As a middle mile provider, QLife does not actively advertise for users of the network. QLife provides services over the fiber-optic network to seven local government organizations (including all schools and the community college), the State of Oregon, the regional medical center and affiliated medical offices, seven telecom and Internet service providers, and a Google Data Center.

QLife and Google plan to partner to provide free Wi-Fi access downtown by the summer of 2011. All of these efforts are added benefits to the local community and the public perception of QLife is very positive. Currently, QLife is exceeding the goals and expectations that were originally envisioned and local government agencies are all receiving excellent services at affordable prices.

City of Lebanon

City Broadband Services

Network Type: Wireless Network

Service Type: Free/Subscription Wi-Fi Services

City Role: Partnership with ISP

Coverage: City-wide

Start Date: 2005

Needs Assessment & Planning

In 2004, Lebanon was looking to bring high-speed wireless to its police patrol cars and public works vehicles. Available cellular phone service consisted of voice, but no data/Internet service for "smart" phones.

As the city began looking to improve its wireless network, it coordinated with other Wi-Fi network owners to ensure all networks would be compatible. From these discussions, a partnership began between the city of Lebanon and Peak Internet. The city proposed to create a wireless network with a capacity far beyond what it needed for its patrol and public works vehicles. With no affordable high-speed Internet options in the city, Lebanon and Peak decided to provide Wi-Fi to the public – both free and extended subscription services. Not only would this be an excellent service for residents, but a vital service for businesses and economic development. Even though no similar partnership existed, the city decided to move forward with the project.

Implementation & Administration

The contract between the city and Peak directed that the city purchase the start-up equipment and that both parties install the equipment. The city was not interested in starting a utility and dealing with the issues that are unique to Internet services (customer support, federal regulations, etc.). As an Internet provider, Peak was already equipped to handle the management of an Internet utility and was therefore designated as the manager of the wireless network. The city replaces any equipment that fails on the main network, and Peak is responsible for the repair of failed equipment on a customer's premise.

The Lebanon City Council approved $100,000 for the start-up equipment, including 80 wireless access points to cover the entire city, and the Wi-Fi network launched in 2005. Anyone can use the wireless services free of charge for up to 10 hours per month. If residents or businesses want more time, a subscription from Peak can be purchased with the base rate of $19.95 per month. This is an affordable option compared to $50-60 being charged by the local phone and cable company companies for broadband services.

The city did not incur any debt with this project. The total contribution to date has been approximately $135,000. The city receives a "kick-back" of 6 percent for any subscription that Peak acquires. The ongoing expenses run about $5,000 per year, including a fee for the electric utility pole attachments and a maintenance fee with the equipment provider.

Through an intergovernmental agreement, the Lebanon Community School District joined Lebanon's public/private network, combining the city's fiber and wireless infrastructure with the school district's fiber network. This provided the city with more fiber bandwidth for wireless services, and the school district is able to provide wireless services to all school facilities.

Results & Benefits

Among its other uses for the wireless network, the city connected its water treatment plant to the network, which brought wireless broadband services to an unserved, remote area. This also enhanced communication between the water treatment plant and other city facilities. The wireless network has also saved the city money by reducing the need for commercial telecom services.

The public perception of the city/Peak service was very positive when it was first proposed, and it is still considered a beneficial service. Not only did it help facilitate competition in the local broadband market, thereby bringing down the cost of wired high-speed Internet access, it also has been used to help recruit businesses to the city. In the last few years, Western University of Health Sciences built a new campus in Lebanon. Although the wireless network was not the only reason the university decided to locate to Lebanon, it was a positive factor in the decision.

Over the last five years, the local phone company has brought down their prices for DSL, and in some areas of the city the speeds are faster than the Peak wireless services. The city has noticed a decline in the number of Peak subscriptions; however, the free access is still popular. Even though subscriptions are declining, and therefore so are the city's "kick-backs," the city still feels this is a valuable service to residents and is worth the small ongoing cost.

City of Tigard

City Broadband Services

Network Type: Wireless Network

Service Type: Free Wi-Fi Services

City Role: City provides services through wireless access points

Coverage: Parks, Downtown, City Hall

Start Date: 2008

Needs Assessment & Planning

The city of Tigard's Wi-Fi network provides free services to targeted areas within the city, including parks, the downtown area and city hall.

The idea of a free Wi-Fi network was first discussed by city staff in response to an increasing demand by local citizens. The goal was to provide a free service without the need for additional staff. Meraki, a new technology utilized by the city, allowed for the creation of a mesh network without the reconfiguration of any existing city Wi-Fi networks. Because of the small price tag, city staff made the decision to launch a free Wi-Fi network.

Implementation & Administration

The initial pilot project, which cost less than $500, allowed the city to test the equipment. The city was pleased with the service provided and the low maintenance needs of the devices. The city then decided to expand services to other targeted areas. The total cost of implementing the Wi-Fi network was less than $2,500. The city used funding allocated for unanticipated projects, leaving no debt associated with this project.

The affordability of this project is due in part to the strategic placement of access points on city facilities such as city hall and the facilities of interested parties. Under an agreement with the chamber of commerce, the city mounted a wireless access point on the chamber's building, which then provides free Wi-Fi to all users within the downtown business area.

Three Wi-Fi connections cover several key locations around the city. Internet speeds vary depending on how far away users are from the primary device. The city uses its information technology (IT) staff to respond to any network problems, but the ongoing maintenance since installation has been minimal – an average of $145 per month.

Results & Benefits

The wireless devices used by the city of Tigard are very flexible, which has provided some additional benefits to the city. For example, Internet access was needed at the Tigard Balloon Festival, and within hours the city was able to temporarily redirect Wi-Fi to the festival location.

Another city benefit is the availability of the Wi-Fi network to serve as a back-up for the city's emergency operations center. The city can also promote itself by directing the free Wi-Fi users to the city's website from the log-in page.

Internet speeds vary depending on how far away users are from the primary device. Despite this issue, city staff believe this free Wi-Fi service is a successful project, and public utilization rates seem to reflect this opinion.

City of Coos Bay

In 2008, the city of Coos Bay began offering free Wi-Fi to the library and downtown area. Rather than directly providing the services, the city contracts with ORCA, a competitive local exchange carrier (CLEC), which then provides the wireless services. The free Wi-Fi is part of a larger contract for services provided to the city, though the city purchased the start-up equipment.

City Broadband Services

Network Type: Limited Area Wireless Network

Service Type: Free Wi-Fi Services

City Role: City pays a local CLEC to provide services by contract

Coverage: Downtown & Library

Start Date: 2008

The city pays $940 per month for ORCA to provide Wi-Fi to city hall and several city facilities including fire stations, parks and city shops. These services are not free to the public; use of the Wi-Fi at these sites must be approved by the city.

The city also pays $130 per month for free public Wi-Fi in the downtown area and $103 for services to the library. Public use is limited to one hour per day. The downtown area includes some of the major tourist sites, including the visitors' center and the art museum.

Because it is paying ORCA to provide the service, the city is not responsible for customer service or maintenance of the network. This arrangement has proven to be very cost-effective to the city and has been a valued service to the community.

Other City Wi-Fi Networks

As the demand for broadband services on-the-go increases, more cities are providing free Wi-Fi services at key locations. In addition to the free Wi-Fi services provided by municipal broadband utilities, there are other cities that are using the ease and affordability of Wi-Fi to provide free services. Other cities may be providing Wi-Fi, but are not listed in this report.

One of the most popular locations to provide free Wi-Fi is in the downtown business corridor. This city service also helps support local businesses. Astoria and Yachats provide free services downtown, and Eugene has a hot-spot in the downtown blocks that include its Saturday Market.

Other popular Wi-Fi "hot-spots" are recreation areas. Astoria provides Wi-Fi at its aquatic center. Eugene has Wi-Fi at three swimming pools, seven community centers and at the Hult Center for the Performing Arts. Salem provides Wi-Fi to its Senior Center and Center 50+. Oregon City recently began providing Wi-Fi at the city community center and swimming pool.

To help facilitate learning, some cities, including Astoria, Corvallis, Eugene, Hillsboro, Oregon City, Salem and Springfield, have created wireless networks at library facilities.

Several cities have Wi-Fi at city administrative buildings, such as city hall, and have made this service free to citizens as an added benefit. If a city is buying and maintaining equipment for a city network, it takes minimal resources to extend that service to members of the public who are using city facilities. Eugene, Hillsboro, Oregon City, Salem and Springfield provide Wi-Fi at city hall or a civic center. Eugene also has free services at its planning department.

Though many cities do not have airports, these facilities can also be a valued location for free city Wi-Fi services. Redmond and Eugene have Wi-Fi at their commercial airports, providing a useful service to business travelers.

Cities can use Wi-Fi networks to help increase communication between "mobile" departments such as police, fire and public works. Eugene has staff-only Wi-Fi for 911, fire and emergency medical services (EMS), but free access is available in the police and fire training classrooms.

Other Local Government Broadband Networks

Clackamas County

Clackamas County, in partnership with Clackamas Education Service District and SandyNet, is building approximately 185 miles of backbone and last mile fiber-optic cables throughout the county. This project is funded in part by a $7.8 million grant from the Broadband Technology Opportunities Program (BTOP), which is part of the 2009 American Recovery and Reinvestment Act (ARRA). The fiber network will be available to any entity on a nondiscriminatory basis. The county will not provide any broadband services, nor will it compete with local service providers. This extensive network will be available for local communication providers to enhance their networks, and it will be used to enhance broadband services to community anchor sites such as schools, libraries, health care and public safety.

Crook County

According to the National U.S. Department of Commerce's website, Crook County received a $3.9 million grant from the 2009 American Recovery and Reinvestment Act. Along with the state's highest unemployment rate, Crook County has limited broadband services. The county partnered with other public, private and non-profit organizations to establish a 65-station computer learning center, to be located in the city of Prineville. The Crook County Computer and Education Center will give county residents the access to education, training and broadband services, which is vital to an area that is in economic distress. The center will deploy a mobile lab which will help bring broadband access to the more remote areas within the county.

Lane Council of Governments

In 2010, the Lane Council of Governments (LCOG) received $8.3 million in American Recovery and Reinvestment Act funding, which was matched by $2.7 million in local contributions. The planned project will bring broadband services to more than 100 critical institutions in portions of Douglas, Klamath and Lane counties. LCOG will be installing more than 100 miles of fiber to connect these institutions to existing fiber networks. Approximately 70 percent of the critical institutions to be connected will be local government facilities including schools, city halls, libraries, fire stations and police buildings. Some state offices, including the state police, will be connected as well. The total miles of fiber installed and the number of institutions that will be connected has not been finalized. For more information on this project, see the Resources section on page 45.

EXHIBIT E

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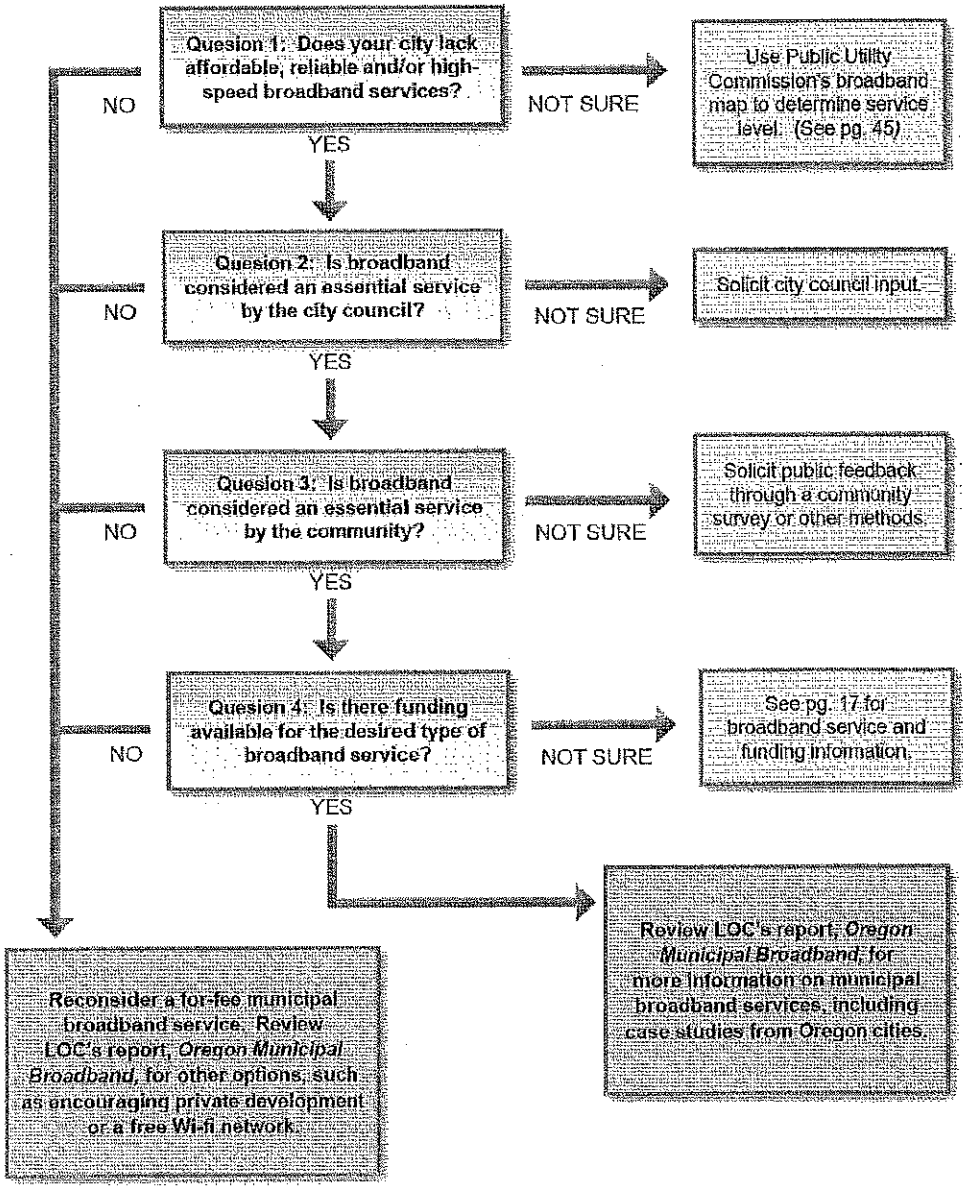
Appendix A

Broadband Flow Chart

Is Municipal Broadband Service the Right Choice for Your City?

Four questions to ask before your city decides to provide broadband services.



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Appendix B

Additional Resources

Referenced in the report

(See also References, page 40)

Municipal Broadband Networks

- Oregon Municipal Broadband Information – resources from Oregon cities (e.g. master plans; enabling ordinances; agreements; policies)
  http://www.orcities.org (select A-Z Index – "T" for Telecommunications)

- National Association of Telecommunications Officers and Advisors (NATOA) – Examples of local broadband initiatives; broadband and economic opportunity (comments to FCC)
  http://www.natoa.org/documents/NATOA%20et%20al%20Comments%20-%20NBP%20Public%20Notice%20%2318.pdf

- Community Broadband Networks
  http://www.muninetworks.org/

- "Mediacom Falsely Accuses Lake County Communities of False Statements"
  http://www.muninetworks.org/content/mediacom-falsely-accuses-lake-county-communities-false-statements

- MuniWireless.com – Information and resources on municipal wireless projects worldwide
  http://www.muniwireless.com/

- Lane Council of Governments – Broadband Network
  www.connectingoregon.org

- "From the Digital Divide to Digital Excellence: Global Best Practices to Aid Development of Municipal and Community Wireless Networks in the United States" – New America Foundation
  http://mediapolicy.newamerica.net/publications/policy/from_the_digital_divide_to_digital_excellence

Broadband and Economic Development

- Portland Broadband Strategic Plan (preliminary documents) – City of Portland
  http://www.portlandonline.com/cable/index.cfm?c=54013

- E-Commerce Zones – Oregon Business Development Department
  http://www.oregon4biz.com/The-Oregon-Advantage/Incentives/Enterprise-Zones/ecommerce-zone/

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Broadband Funding

- Special Public Works Fund (Government Projects) – Oregon Business Development Department
  http://www.orinfrastructure.org/Learn-About-Infrastructure-Programs/Interested-in-a-Community-Development-Project/Special-Public-Works-Fund/

Broadband Services - Cost and Availability

- Oregon Broadband Map – Oregon Public Utility Commission
  www.broadband.oregon.gov

- National Broadband Map – National Telecommunications and Information Administration (NTIA)
- http://broadbandmap.gov/

- Landline/Mobile/Internet Providers Database – CUB Connects
  http://cubconnects.org/

Broadband Strategic Planning

- National Broadband Plan – Federal Communications Commission
  http://www.broadband.gov/download-plan/

- Portland Broadband Strategic Plan (preliminary documents) – City of Portland
  http://www.portlandonline.com/cable/index.cfm?c=54013

Telecommunications and Right-of-Way

- Telecommunications Tool-Kit – League of Oregon Cities
  (A-Z Index – "T" for Telecommunications. Available to download for LOC members)
  http://www.orcities.org

- Oregon Utilities Notification Center – Joint Trenching Examples
  http://www.digsafelyoregon.com/joint-trench-examples.asp

Legal Resources

- Community Assistance for Law Enforcement Act (CALEA) – Federal Communications Commission (FCC)
  http://www.fcc.gov/calea/

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Appendix C

Glossary

NOTE: NOT ALL TERMS LISTED WERE USED IN THE REPORT. THESE DEFINITIONS MAY BE USEFUL IF A CITY CONDUCTS MORE RESEARCH ON TELECOMMUNICATIONS AND BROADBAND.

Broadband Services & Users

Broadband: High-speed Internet connections that allow users to connect to websites and download content at a faster speed. Broadband can also be a wireless service carrying voice, video and data channels simultaneously. The Federal Communications Commission (FCC) defines broadband as advanced communications systems capable of providing high-speed transmission of services such as data, voice and video over the Internet and other networks. Transmission is provided by a wide range of technologies, including digital subscriber line (DSL) and fiber-optic cable, coaxial cable, wireless technology and satellite. Broadband platforms allow the convergence of voice, video and data services onto a single network.

Cable Services: Defined in the Federal Telecom Act as (A) the one-way transmission to subscribers of (i) video programming or (ii) other programming service; and (B) subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service.

End User: An individual, association, business, government agency or other entity that subscribes to a broadband service and does not resell it to another provider.

Voice over Internet Protocol (VoIP): Wireless or wireline technology that allows the use of a broadband Internet connection to make voice telephone calls. A special adapter is used to send a voice call in a digital form using the Internet rather than the traditional voice stream. A wireless example is Clearwire; a wireline example is Comcast Digital Voice.

Broadband Technology

Broadband over Power Line (BPL): BPL systems use existing electrical power lines as a transmission medium to provide high-speed communications capabilities by coupling radio frequency (RF) energy onto the power line, then distributing it to a home. BPW systems operate on an unlicensed basis under Part 15 of the FCC's rules. Because power lines reach virtually every community in the country, BPL has the potential to play an important role in providing broadband services to American homes and consumers. There are two types of BPL systems: In-House BPL, which uses the electrical outlets available within a building to transfer information between computers and other home electronic appliances; and access BPL systems, which carry high-speed communication signals outdoors over the medium voltage (MV) lines, from a point where there is a connection to the Internet (backhaul point), to neighborhoods where they are distributed to homes via the low voltage (LV) power lines or Wi-Fi links.

Coaxial Cable (Cable): An electric cable composed of an insulated central conducting wire wrapped in another conducting wire. This type of network is mostly used by cable TV providers.

Digital Subscriber Line (DSL): A generic name for a family of digital lines that are provided by CLECs and local telephone companies to their local subscribers. Such services, known by

different names, propose to give the subscriber up to 8 million bits per second one way downstream to the customer, and somewhat fewer bits per second upstream to the phone company. DSL lines typically operate on one pair of wires like a normal analog phone line. (Newton's Telcom Dictionary, 25th Edition)

Fiber-Optic Cable (Fiber): Thin filaments of glass through which light beams are transmitted over long distances, carrying enormous amounts of data. This network is being used by Verizon and other companies offering "fiber-to-the-premise."

Satellite: A microwave receiver, repeater and regenerator of voice, video and data transmissions. The satellite is in orbit above the earth.

Wireless Technology: Any system of transmitting and receiving data without wires. Examples include:

Long Term Evolution (LTE): Provides for a larger coverage area with fewer antennas and is being used to build nationwide 4G networks. LTE is being deployed in Oregon by mobile wireless service providers such as AT&T Wireless and Verizon Wireless.

Wi-Fi: A term coined by the Wireless Ethernet Compatibility Alliance which designates wireless products that are interoperable even if they are from different manufactures. The use of these products creates a wireless broadband network that can be utilized by any user.

WiMAX: Provides for a larger coverage area with fewer antennas, however it uses a different standard than LTE. WiMAX is being used to build nationwide 4G networks and is currently being offered in the Willamette Valley by the wireless provider, CLEAR.

Wireless Mesh Network: A wireless network configured so that each wireless node is interconnected to every other node within the network, thereby creating the "mesh."

Wireless Access Point: A device that connects wireless communication devices (e.g. computers and laptops) to form a wireless network, such as Wi-Fi.

Broadband Providers

Cable Providers: Companies with right-of-way franchises to provide cable services. Many of these companies now provide voice and data services. Examples include Comcast and Charter.

Competitive Local Exchange Carriers (CLECs): Providers of local phone services that have Public Utility Commission certificates for operation. Some own a facility located in the public right-of-way and some may compensate to a facility-based carrier for use of that facility for resale purposes.

Incumbent Local Exchange Carriers (ILECs): Traditional phone companies that provide exchange access service (dial tone service). Some of these providers offer cable and data services.

Internet Service Providers (ISPs): A vendor providing Internet access to corporate and individual customers.

Long Distance/Long Haul Carriers: Service providers that do not offer local service, but "transmit" through public right-of-way via facilities. They may own, lease or pay compensation to a facility-based carrier. Examples include AT& T, MCI and Sprint.

Last Mile Providers*: Provides broadband services, such as voice, video and data, directly to the end user. The provider may own their own broadband network, or lease space off another network, such as a middle mile provider.

Middle Mile Providers*: Connects last mile providers to a broadband backbone.

Resellers: Companies that may or may not own telecommunications facilities but pay compensation to a facility-based provider for use of systems to deliver wholesale or retail services to an end user.

Wireless Service Providers: Companies that provide telecommunications services primarily through wireless technologies. These include Verizon Wireless, Sprint, AT& T, Nextel and T-Mobile, and wireless resellers such as Virgin Mobile, TelePlus and Consumer Cellular that pay compensation to a wireless provider for use of their facilities. Some wireless companies provide broadband services as direct connections to the Internet.

Other Technical Terms

Bit: The basic unit of measurement for information data and digital communication. Bits per second is a measurement of data transmission speed.

Kilobit: 1,000 bits

Megabit: 1 million bits

Gigabit: 1 billion bits

Redundancy: Having at least one back-up system in place in case of a network failure on the main broadband network.

** Note: "Middle mile" and "last mile" provider can have different meanings within the telecom industry.*

EXHIBIT E

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